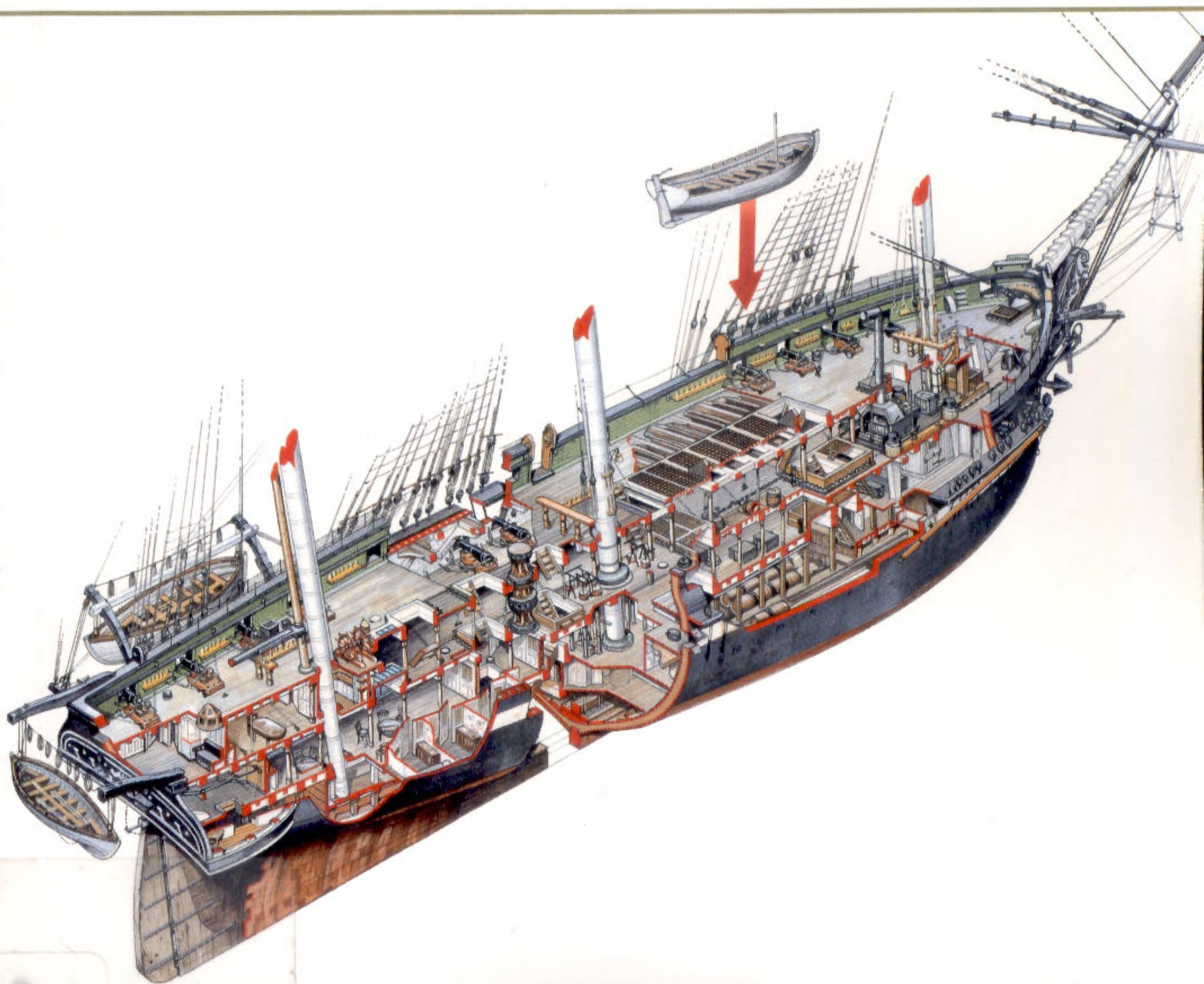


American Heavy Frigates 1794–1826



Mark Lardas • Illustrated by Tony Bryan

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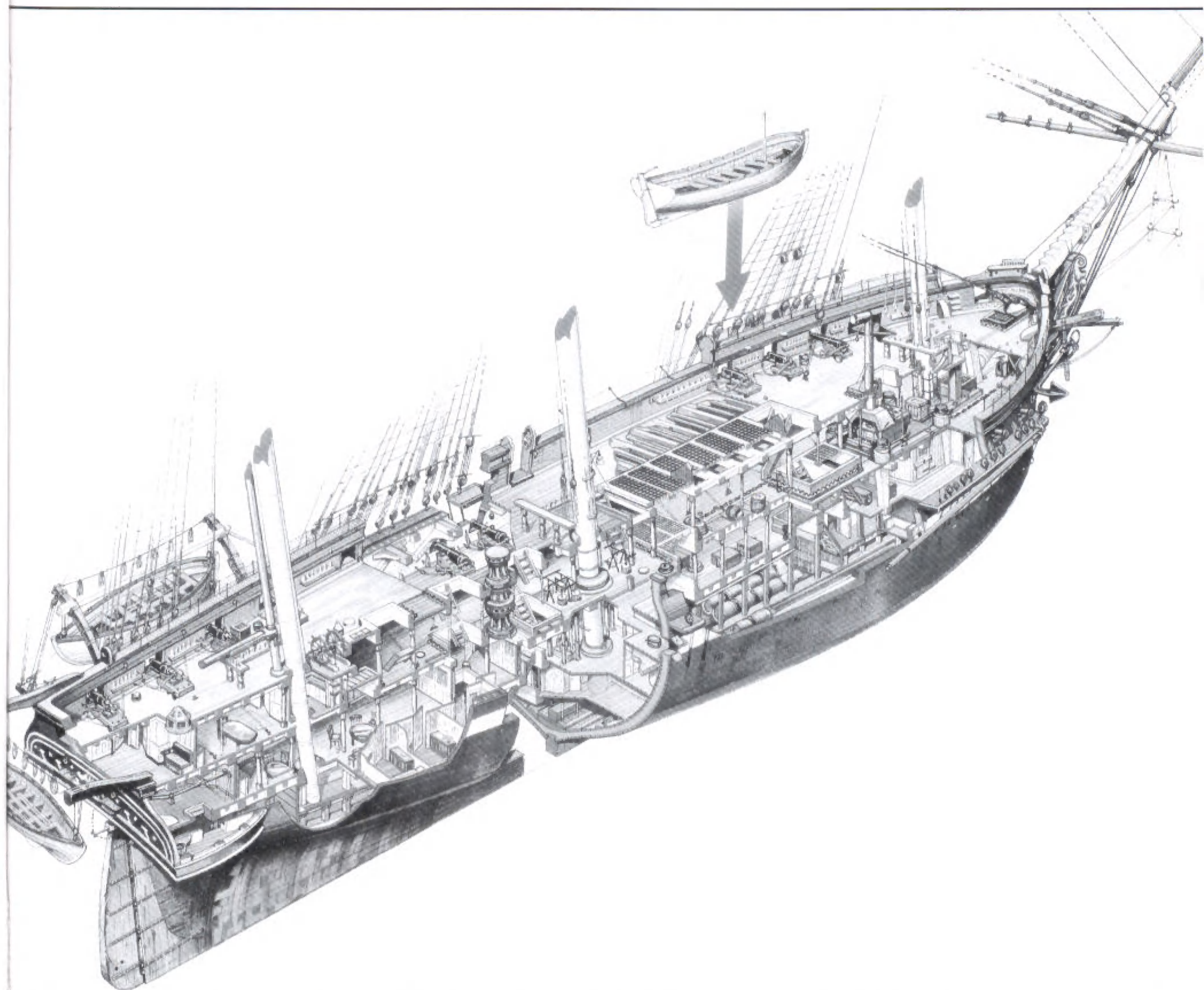
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Author's dedication

To my father, Nicholas Lardas, and my grandfather, George N. Lardas. They sparked my interest in the American 44-gun frigate.

Editor's note

The following abbreviations indicate the sources of the illustrations used in this volume:

LOC – Library of Congress, Washington DC
NHF – United States Navy Historical Foundation, Washington DC
USNA-M – United States Naval Academy Museum
USNA-R – United States Naval Academy Robinson Print Collection
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AMERICAN HEAVY FRIGATES 1794–1826

INTRODUCTION

The modern image of the sailing-era frigate is of a 44-gun frigate with a main battery of 24-pound guns. In nautical fiction authors love pitting the hero against a 44-gun French or American frigate. Fiction is only part of the reason. The last surviving American frigate of that era, USS *Constitution*, belongs to this class. The most famous Royal Navy frigate of the Napoleonic Era, HMS *Indefatigable*, was one of Britain's rare 24-pound frigates.

Yet 200 years ago the 44-gun frigate was a freak. The world's navies built only a handful of these monsters. By 1802 the 24-pound frigate was considered a failed experiment. The Royal Navy decided that the smaller 38-gun frigate was a handier choice. The American Navy built 13 frigates between 1794 and 1801, but only three 24-pound frigates. No others were built or planned.

Ten years later these three American 44s redefined the frigate. Their victories led to a new generation of large frigates. Navies now built and maintained frigates of a size formerly associated with ships-of-the-line, and large frigates dominated the last three decades of the era of the sailing warship.

By the 1780s neither the frigate nor the 44-gun warship were new concepts. Frigates – warships with one complete gundeck and additional guns on the forecastle and quarterdeck – had been used since the beginning of the 18th century. By the end of the American Revolution

The *Bonne Homme Richard* and HMS *Serapis* fought the most famous ship duel of the American Revolution. Both were two-deckers, although both have been erroneously described as frigates. (LOC)



light frigates carried nine or 12-pound long guns on their gundecks. Heavy frigates carried a main battery of 18-pound cannon.

Frigates were maids-of-all-work – scouts, commerce raiders, escorts, and amphibious assault ships. Generally faster than ships-of-the-line, they were also handier, capable of sailing in waters that would ground the larger warship. Frigates could catch anything they could beat, and run from anything bigger.

The 44-gun ship of the 1780s was a two-decker, with two complete gundecks, and guns on the quarterdeck and forecastle. It was a miniature ship-of-the-line, too weak to stand in the line of battle. Two-deckers generally mounted 12-pound and 9-pound long guns on their gundecks.

The extra deck made the 44 leewardly – the hull itself acted as an immovable sail, and the short waterline made it a slow ship. They were useful despite these limitations – good convoy escorts, economical flagships on stations too small to merit a ship-of-the-line, and useful as troop transports. Minor powers often used a 44-gun two-decker as a flagship.

The two-decker and the frigate often blurred, even in 18th-century opinion. A warship smaller than a ship-of-the-line, with more than one complete deck of guns, was often called a frigate. The Continental Congress congratulated John Paul Jones on his victory over “the frigate *Serapis*,” a classic two-decker – not a frigate. Two decades later, Congressional ignorance of the fine points of naval architecture enabled a new United States Navy to experiment with an equally new warship, the 44-gun frigate.

DESIGN AND DEVELOPMENT

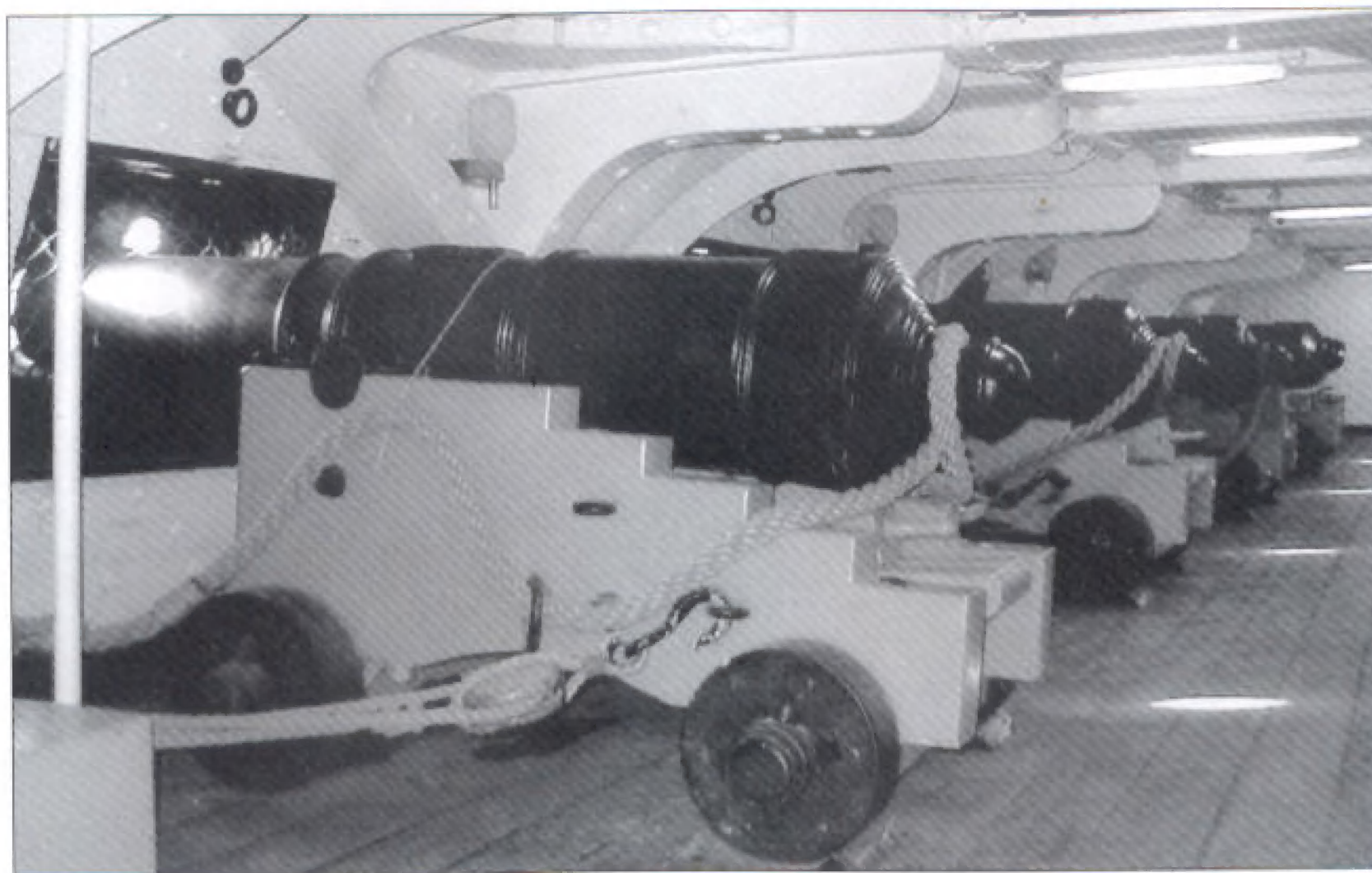
America builds a navy

Following American independence, the Barbary powers turned their attention against United States ships. The Barbary powers were a collection of small states clustered on Africa's Mediterranean and Atlantic coasts. Each was centered on a fortified port – ranging from Morocco in the Atlantic to Tripoli in what is now Libya.

Although each state was technically part of the Turkish Empire, their rulers – Deys – rarely let such technicalities affect them. Each behaved as if he were independent, maintaining his own foreign and domestic policies.

Lacking natural resources other than a fortified port, the major industries of the Barbary states were piracy and slave trading. To assure a steady supply of

The 24-pound long gun allowed a Humphreys frigate to beat any standard frigate in single combat, and let it fight a two-deck ship-of-the-line on even terms in any weather where the frigate could be caught by the two-decker. (Don Seltzer photo)



goods – captured ships and people – they frequently went to war with whatever seafaring nations were viewed as weak. Under normal circumstances the European powers kept the Barbary states in check, but in the early 1790s Europe was absorbed with the consequences of the French Revolution.

In 1793 British preoccupation with Republican France gave Algeria unfettered access to the Atlantic Ocean. The resulting loss of United States merchant ships prompted Congress to establish a navy. On March 24, 1794 it appropriated money for six frigates.

Four were authorized as 44-gun frigates. The Barbary states also had 44-gun ships, but it was unlikely that these were 44-gun frigates with a main battery of 24-pound cannon. They were more likely to be either traditional two-deckers, or standard frigates with enough small, light cannon crammed on the upper works to make up a 44-gun battery.

Foreign trends

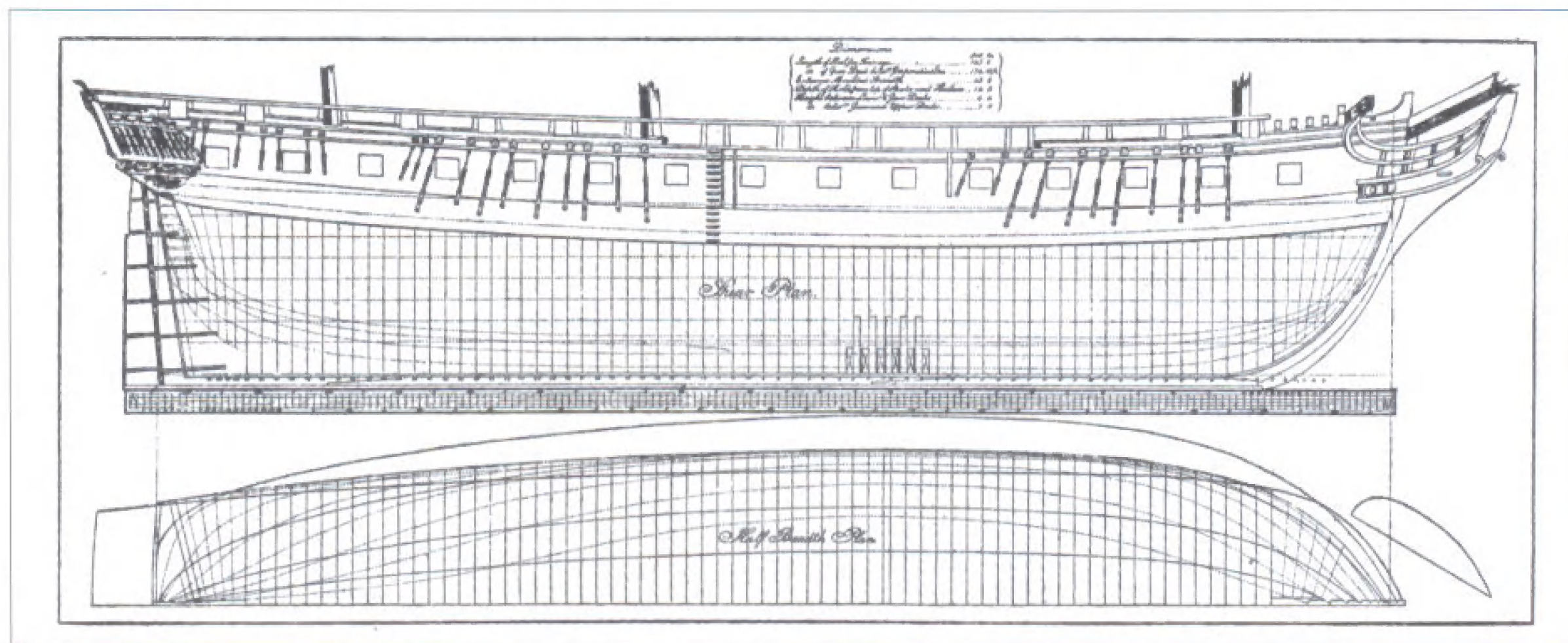
In the 1780s the French Navy experimented with a 44-gun frigate. It had one gundeck mounting 28 or 30 guns rather than the normal 24 or 26 guns. A 44-gun two-decker carried 20 to 22 guns on the main gundeck. The French frigate *Pomone* was also armed with a main battery of 24-pound guns, rather than the conventional frigate's 18-pound long guns.

Pomone was big by European standards – 160 feet between perpendiculars. That barely left room for 28 guns on its main deck. When the Royal Navy captured *Pomone* in 1794, they reduced the battery to 26 guns and re-rated it as a 40-gun frigate.

France also converted eight small ships-of-the-line into 24-pound frigates by “razeeing” them – removing the quarterdeck and forecastles, and converting the upper deck into a forecastle and quarterdeck. These ships had 24-pound guns on the main deck and 12-pounders on the quarterdeck and forecastle. Only three – *Experimente*, *Scévola*, and *Brutus* – appeared to have an active role during the subsequent years.

The standard heavy frigate in the French Navy remained the 40-gun frigate but the French continued building 44-gun super-frigates throughout the 1790s. Eight were planned prior to the French Revolution, and probably only eight were built by 1801.

Line drawing for the *Constitution*. The revolutionary aspect of Joshua Humphreys' design lay in its unprecedented size. (AC – US Navy illustration)



The performance of the French 44-gun frigates and razees was dismal. The Royal Navy quickly captured the *Pomone*, *Forte*, and *L'Egyptienne*. The *Scévola*, *Impatiente*, and *Brutus* were destroyed or wrecked in action. The problem was not the 44-gun frigate, but inadequate crews. The French Revolution denuded the French officer corps, and used naval gunners as field gunners.

Initially the French 24-pound frigates alarmed the British. In 1794 the Royal Navy captured the *Pomone* off the Channel Islands. Reports that more French super-frigates were coming persuaded the Admiralty to raze three small 64-gun ships-of-the-line into 44-gun frigates. As with the French razees, these three ships – HMS *Indefatigable*, *Anson*, and *Magnanime* – retained their main battery of 26 24-pound long guns. They carried a mixed battery of 12-pound long guns and 42-pound carronades on their quarterdecks and forecastles. The Royal Navy also replicated the *Pomone* with a frigate launched in 1797 – HMS *Endymion*. It was officially rated as a 38-gun ship, as was HMS *Cambrian*, even though both were built with scantlings that could support a battery of 24-pound guns. They were big by British standards, each with a 1200-ton displacement.

The *Indefatigable* became one of the most famous frigates of its day, and the *Endymion* was considered a prize command – fast, seaworthy, and powerful. Despite the outstanding performance of these ships, Britain abandoned building 44-gun frigates after 1800. The extra firepower of these ships was superfluous: British frigates armed with 18-pound guns regularly defeated French warships with 24-pound guns. Also the 24-pounder was more difficult to manage than the 18-pound gun, and a 44-gun frigate required 330 hard-to-find seamen as opposed to the 38-gun frigate's 270-man crew.

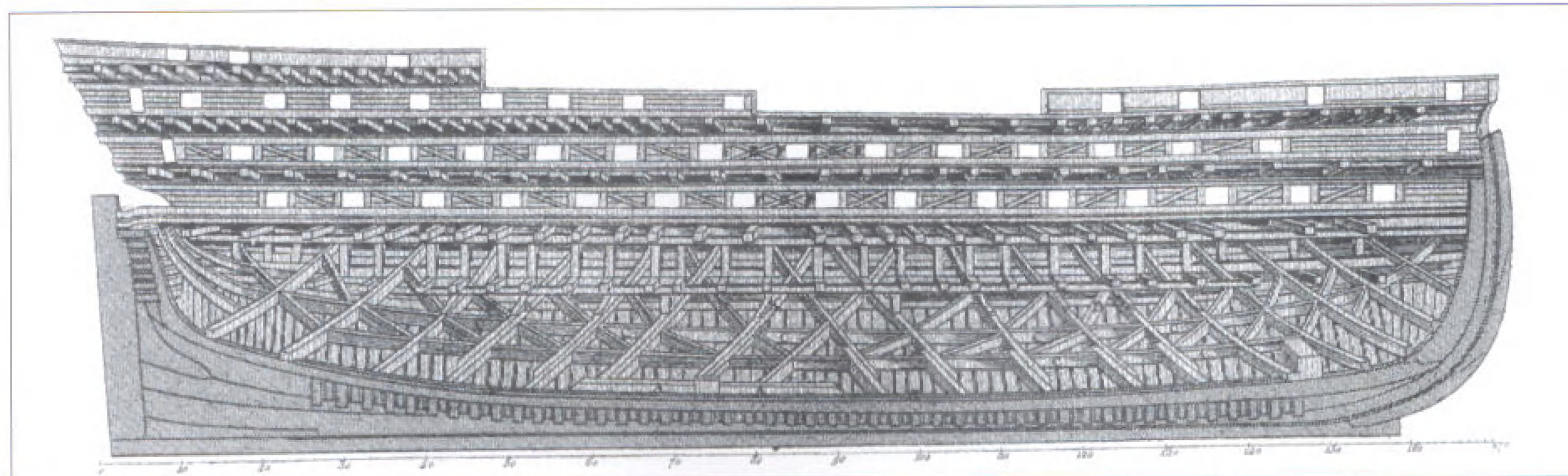
The Humphreys frigates

British and French disappointment with the 44-gun frigate lay ahead when Congress authorized four 44-gun frigates. Joshua Humphreys was given the task of designing the new American frigates. A self-taught Philadelphia shipbuilder, Humphreys produced several fine frigate designs during the American Revolution – notably the *Randolph* and *Virginia*. He also designed a 74-gun ship-of-the-line, a design superior to that of the only American ship-of-the-line launched during the American Revolution, the 74-gun *America*.

Humphreys realized that the limiting factor for the United States was ships, not men. In 1793 he wrote to Senator Robert Morris: "... as

The Seppings system of diagonal riders permitted construction of longer wooden ships. The *United States*, *Constitution*, and *President*, built with a more primitive system of diagonal riders, suffered from hogging throughout their careers.

(AC – Iconographic Encyclopedia)



our navy for a considerable time will be inferior in numbers we must consider what size ships will be an overmatch for those of an enemy; such frigates as in blowing weather to be an overmatch for common double-deck ships, and in light winds to evade coming to action. ... Ships built on these principles will render those of an enemy in a degree useless, or require a greater number before they dare to attack our ships."

Humphreys wanted big ships, frigates with 24-pound cannons – guns normally carried on ships-of-the-line. Twenty-four-pound frigates could handily defeat a typical European frigate conventionally equipped with 12-pound or 18-pound guns in a single-ship action. This would force a European enemy to deploy warships in squadrons. Thus constrained, an enemy would cover less ocean than if their warships could operate individually.

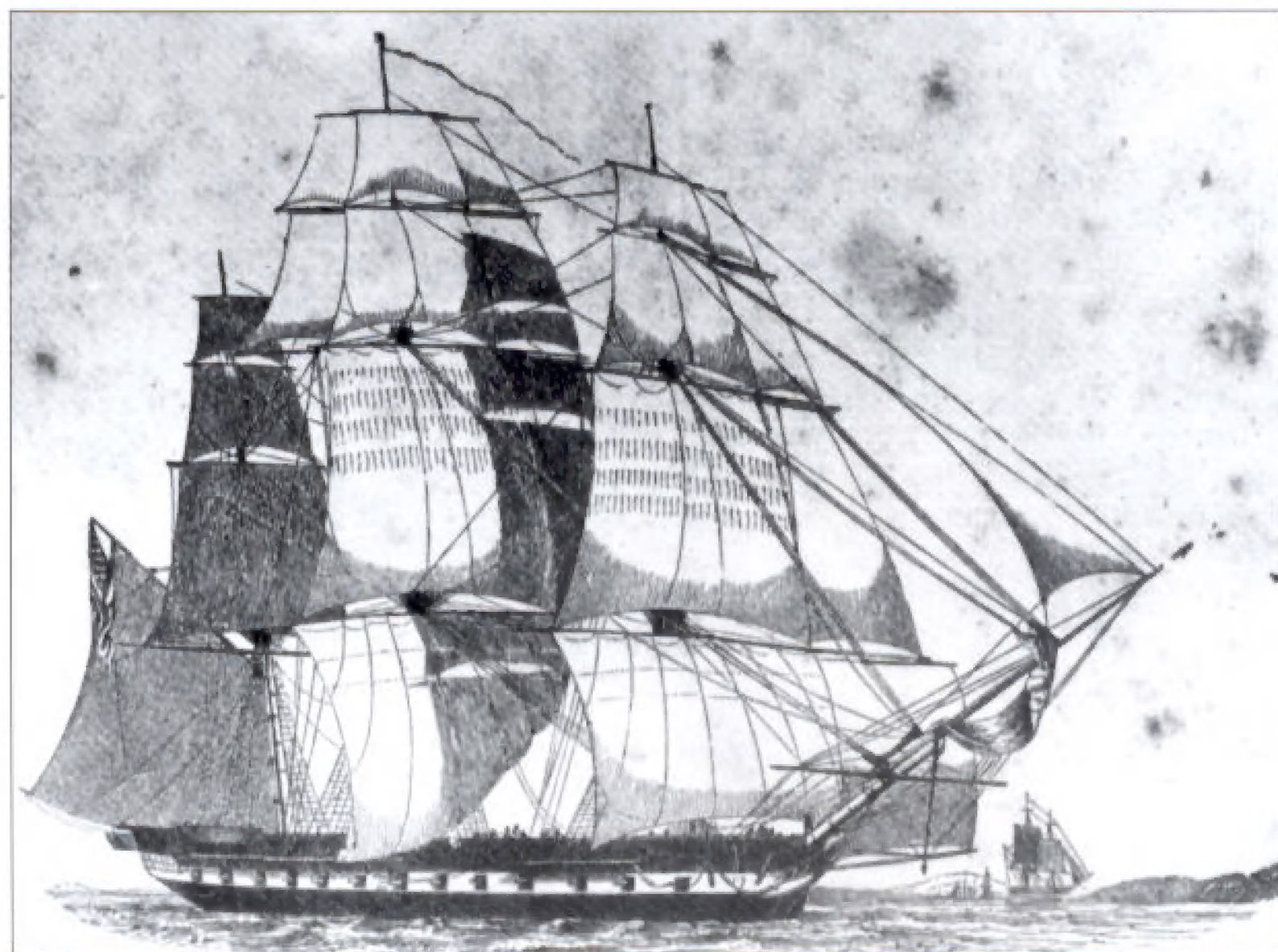
Additionally, a 24-pound frigate could meet a two-deck ship-of-the-line on even terms during heavy seas – the only time a ship-of-the-line could reliably overtake a frigate. In such rough weather the larger warship would have to keep its lower gunports sealed, fighting only from its upper gundeck – typically 18-pound guns – and the light guns on the quarterdeck and forecastle.

Humphreys designed a frigate with a 150-foot keel – longer than the gundeck of most British 18-pound frigates. His warships had an overall length of 175 feet, and carried 30 24-pound long guns on the gundeck without crowding.

His design pushed the limits for a purely wooden ship using the then-conventional transverse framing. Traditionally ships were built by laying down a keel – a thick, strong "backbone," then adding transverse frames perpendicular to the keel. The result looks much like the bones of a fish, and, like a fish, a ship built this way can bend along the keel. But the longer the length, the more vulnerable such a ship is to hogging and sagging.

Hogging occurs when the ends of the ship are pulled down by weight concentrated in the bow and stern. Sagging occurs when the midship section sinks under weight concentrated amidships. Furthermore a long gun was heavy. A 24-pound long gun weighed 2½ tons. A ship is least buoyant at its bow and stern, with the greatest buoyancy amidships. Guns pull the bow and stern of a ship down, while water pushes the middle up. Over time, the ship's keel curved down like a banana, stressing the upper decks, and weakening the ship's hull. Hogging contributed to *L'Egyptienne's* short Royal Navy career after its capture from France.

The *United States* was the first frigate completed and remained a favorite throughout its career. This drawing, showing the ship as it appeared in the 1840s, illustrated the cover of a manual on seamanship. (NHF)



A deck increased longitudinal rigidity, critical to resisting hogging and sagging, but decks at the top of the hull were more lightly built than those at the lower part of the hull. A ship-of-the-line with multiple gun decks and greater depth of hull had greater longitudinal strength than single-decked frigates. This was one reason why ships-of-the-line typically were longer than frigates. Yet, even with multiple decks, 175 feet was about the maximum length for a wooden ship built using traditional framing.

In 1811 Sir Robert Seppings (who became Surveyor of the Royal Navy in 1813) introduced diagonal framing to ship construction. The "Seppings Method" created a trussed frame, which increased longitudinal rigidity dramatically. The diagonal framing linked several transverse frames together in triangles. These resisted longitudinal bending better than the right angles of traditional construction. A square can be easily collapsed into a parallelogram, but a triangle is harder to misshape. Diagonal framing permitted ships of greater length, and was thus quickly adopted on both sides of the Atlantic.

When Humphreys designed his frigates Seppings diagonals lay 18 years in the future. Humphreys proposed a more primitive version of these diagonal riders, but it appears that this was used only on the USS *United States* and the USS *Constitution*.

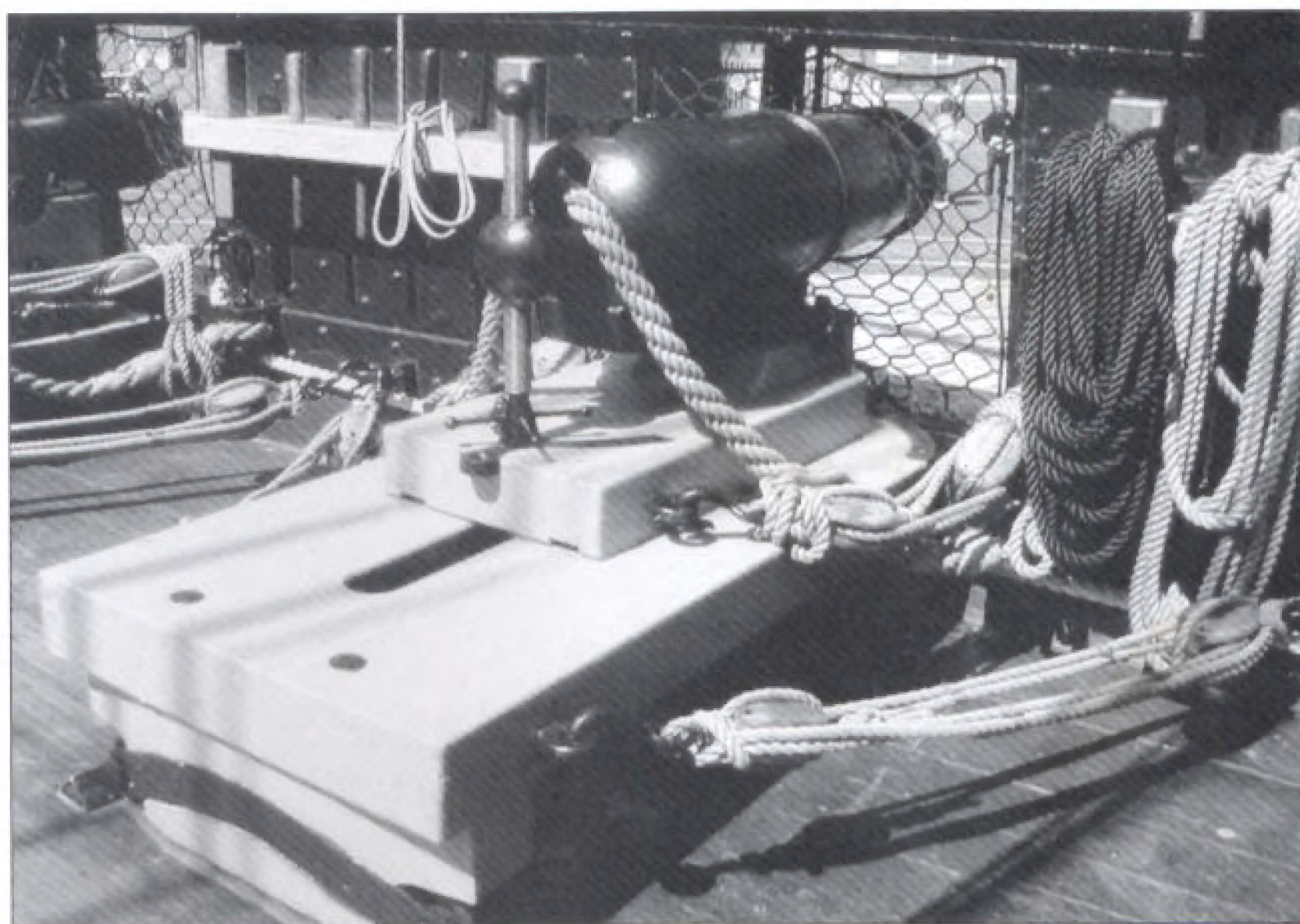
Humphreys depended on the scantlings and the construction materials for additional strength. The frames were of a size traditionally used on a 74-gun ship-of-the-line. Transverse frames were up to two feet thick. Humphreys specified live oak for the American ships. Live oak, found on the southern coast of the United States, is dense and strong – perhaps five times stronger than white oak. Thus the American frigates, using materials unavailable in Europe, were inherently stronger than their European counterparts.

True frigates, these ships carried 30 24-pound long guns on the upper or gundeck and berthed the crew in a deck below the gundeck called the berth deck. When launched they also carried 14 long 12-pound guns on the quarterdeck, although these were soon replaced with carronades.

European frigates typically had a detached forecastle and quarterdeck. The Humphreys design used a forecastle and quarterdeck joined by wide gangways. The resulting flush deck was called a spar deck. None of the Humphreys frigates ever carried a complete bank of upper deck guns, even after rebuilds in the 1820s through to the 1840s.

The American Navy had no shipyards of its own, so Congress leased commercial building yards in six ports and turned them

Carronades replaced the upper deck 12-pound guns early in the career of the first frigates. This replica 32-pound carronade is one of the few 1812-era carronades now aboard the *Constitution*. (Don Seltzer photo)



over to the Navy. The construction of the first large warships in North America since the American Revolution, with their exacting materials requirements, progressed slowly. Construction began in 1794 on the 44-gun *United States* and *Constitution*.

The bill authorizing construction of the six frigates had provisions for cancellation if Algiers and the United States made peace. When this occurred in 1795, work stopped immediately. Congress, suspicious of Algerian motives, passed supplemental appropriations allowing the completion of the three most advanced ships – *United States*, *Constitution*, and the 36-gun *Constellation*. The bill also permitted accumulation and storage of construction materials for the other ships.

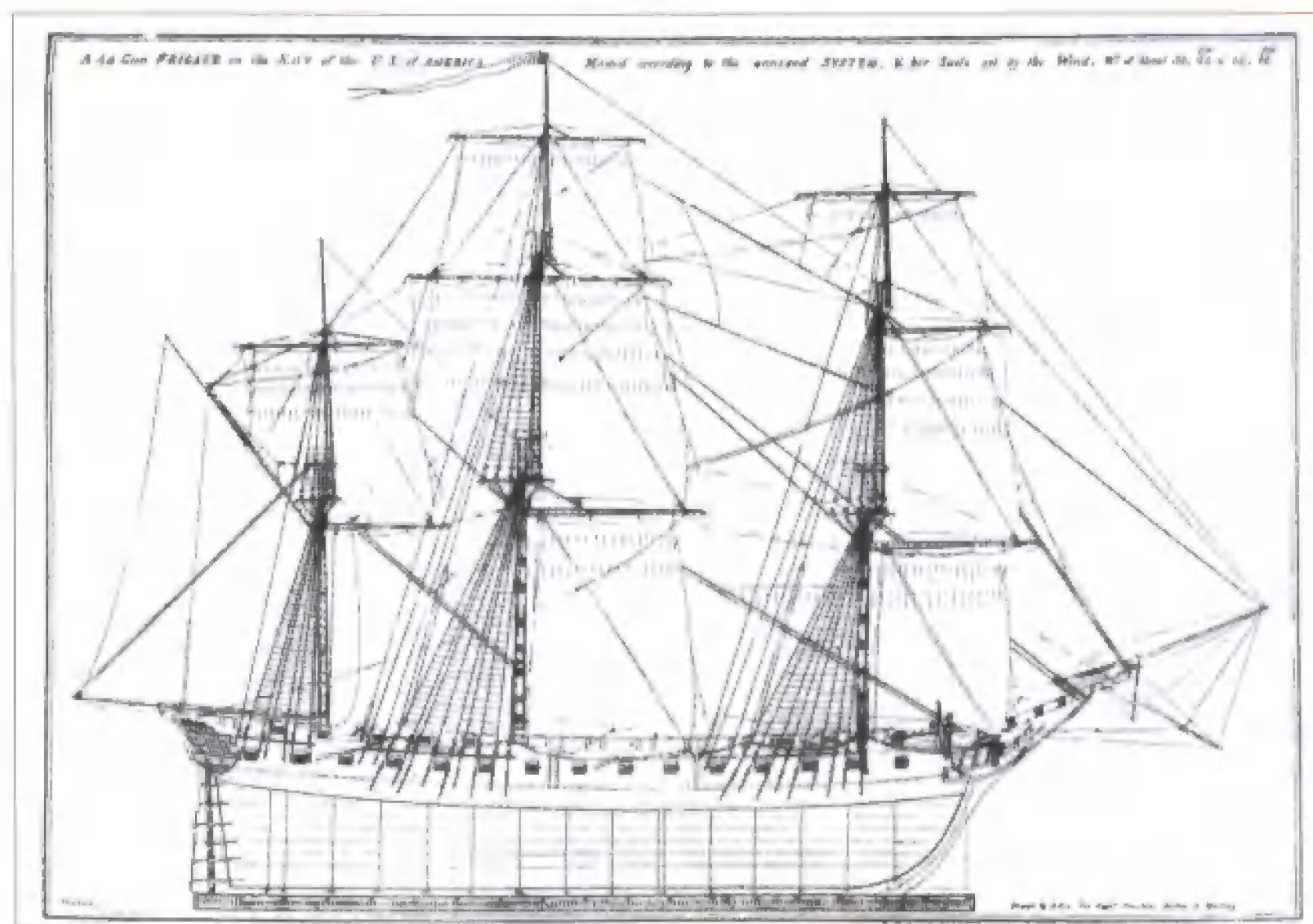
The *United States* was the only frigate completed under Joshua Humphreys' direct supervision. During construction it gained a poop deck. A deckhouse, also called a roundhouse, was added aft of the wheel that ran the width of the hull. The structure must have been light, because no one ever mounted guns on the poop – remarkable in a navy known for overgunning warships. It was completed early in 1797, coming off the ways on May 10, 1797. Soon the *Constitution* joined it. Launched on October 21, 1797, the *Constitution* closely followed Humphreys' plans, although George Claghorn of the Edmund Hart shipyard superintended its construction.

Both ships were very strongly constructed, allowing them to enjoy long careers in the United States Navy. The *Constitution* survives today, but the *United States* was broken up in 1865, having been sunk by the Union at the beginning of the American Civil War. It was then raised by the Confederacy, burned by the Confederacy, sunk again, then raised a final time to clear Norfolk harbor. Even then the hull proved difficult to demolish.

Ironically, the 24-pound cannons for both ships came from Britain. As they were fitting out, the United States became involved in a naval war with Revolutionary France. Britain permitted the export of ordnance to the United States to support the enemy of their principal adversary.

In 1800 the *United States*'s upper battery of 12-pounders was exchanged for carronades – short-barreled, lightweight artillery, capable of throwing a much larger ball than a long gun whose barrel weighed the same. A 32-pound carronade was two-thirds the weight of a 12-pound long gun, and fired a ball nearly three times heavier. Substituting 22 32-pound carronades for 14 12-pound long guns increased the broadside weight by 34 percent without increasing the weight of metal on the decks.

Initially the Humphreys frigates were undersparred. This illustration appeared in Thomas Truxtun's book, *System of Mastng*, in 1794. Drawn by Josiah Fox, it shows a sail plan initially intended for these ships. (AC – System of Mastng)



Construction resumed on the other frigates in 1798, as the Quasi-War with France restored Congressional interest in the Navy. However, the *United States* and *Constitution* increased the controversy about the wisdom of building such large frigates. Both ships had been launched with difficulty: the *United States* came off the ways fast enough to require repairs for damage suffered in launching, and the *Constitution* stuck on the launching ways.

The ships proved indifferent sailers at first. The *United States* was particularly laggardly, a fault attributed to the roundhouse. The problem lay in inadequate masts. Rigged conservatively, they initially sailed with short masts and spars typical of European frigates of the era, capable of carrying nothing higher than topgallant sails. Within a few years their captains fixed this deficiency, installing taller masts, longer spars, and larger sails – adding not just royals, but skysails above the royals.

Teething problems led to claims that the Humphreys 44 was too big. Josiah Fox advocated smaller ships. He had received formal training in shipbuilding at Admiralty shipyards in Britain before emigrating to the United States. Initially employed as Humphreys' assistant, drafting copies of the lines, Fox quickly rose due to his undoubted ability. When the overseer of the Gosport frigate was reassigned to the critical job of finding timber, Fox was appointed in his place.

Fox redesigned that frigate, intended as another 44-gun ship. He drafted plans for a smaller ship – smaller than Humphreys' design for 36-gun frigates. Thomas Truxtun and Benjamin Stoddard supported Fox in this effort. Truxtun was the Navy's star captain after capturing a French frigate while commanding the *Constellation*, a 36-gun frigate. Stoddard, the first Secretary of the Navy, felt that the large 24-pound frigate was not cost effective. The downsized ship that came down the ways when work resumed was rated as a 44-gun frigate on the Navy list but could only carry 18-pound long guns. Named *Chesapeake*, it dropped from the ranks of the 24-pound frigate to become a standard frigate. It had a dismal career.



Benjamin Stoddard, the first Secretary of the Navy, mistrusted Humphreys' conception of super-frigates armed with 24-pound guns. He limited further construction to standard frigate designs. (NHF)

The last Humphreys frigate finished, the *President*, was reputedly the fastest. In this watercolor by Antoine Roux, the *President* is shown riding out a storm at anchor off Marseilles in 1802. Note the lowered topmasts and the position of the course spars. (NHF)





"Gradual Increase" frigates supplemented the initial Humphreys frigates. In this painting, a watercolor by A. Carlotta of the Mediterranean Squadron leaving Port Mahon, Menorca, in January 1825, the frigates *Constitution* and *Brandywine* can be seen ahead of the ship-of-the-line *North Carolina* (left and aft). (NHF)

Work also resumed on the *President* in New York. Completed in 1800 it was both the last 24-pound frigate and the last frigate built for the US Navy for nearly a dozen years. At Stoddard's directive, additional frigates built at the onset of the French war were designed to carry 18-pound long guns. The 19th century began with the United States agreeing that the 24-pound frigate was a blind alley.

The period between 1800 and 1813 gave the United States Navy time to learn to use 24-pound frigates to best advantage. The masts and spars of all Navy warships grew throughout the decade, but the large frigates grew most. These ships, displacing 1500 tons, could be fitted with tall masts and long spars without oversparring them. They proved good sea boats, and, with their larger masts, among the swiftest ships around. Although less nimble than smaller frigates, given a properly trained crew they had sufficient maneuverability that smaller frigates could not use their agility to avoid the big frigates' broadsides.

Officers in the United States Navy tended to cram as many guns as they could on a ship's deck, of as large a size as possible. The weight of the guns hogged several light American frigates so badly that they became useless. The Humphreys frigates proved less vulnerable to this slow-motion demolition. All three were available in 1812, while fewer than half of the ten lighter frigates built by the Navy were capable of sailing.

War expansion

The success of the Humphreys frigates in the first year of the War of 1812 led Congress to authorize six more 44-gun frigates in January 1813. Construction immediately began on three. Joshua Humphreys was nearing retirement, and Fox had been eclipsed. Design was assigned to William Doughty, who had assisted both Humphreys and Fox in the 1790s and the first decade of the 1800s.

Doughty, given a free hand, borrowed from Humphreys, not Fox. His design was as long as the Humphreys frigates – 175 feet between perpendiculars. It was one foot wider, with a 44-foot beam, slightly shallower, and fuller fore and aft, both to provide additional buoyancy at the ends and to improve sailing qualities.

These were true double-banked craft. The spar deck was stronger and the gangways along the waist were wide enough to allow guns to be

mounted along the entire length of the hull. They carried long 24-pounders on the main deck, and 42-pound carronades on the spar deck. As with the earlier frigates, these ships never mounted a full battery of guns on the spar deck.

Only two were completed, the *Guerriere*, built in Philadelphia, and the *Java*, in Baltimore. The third ship, the *Columbia*, being built in the Washington Naval Yard, was burned on the stocks to prevent its capture when the British occupied the Capitol Building in 1814.

The frigates were magnificent sailers, but had short careers. Built during wartime, their construction was hasty, and the materials used were often substandard. As a result, they quickly decayed. Neither ship saw ten years' active service. *Java* sailed for less than five years.

The Royal Navy also commissioned frigates that matched – and exceeded – the American warships. They quickly refitted *Endymion* with 24-pounders and built two 60-gun frigates, the *Leander* and *Newcastle*. Additionally, the Admiralty had five more frigates built using the lines of the *Endymion*. These ships were built of fir and pitch-pine, to speed construction.

The Royal Navy also razed three ships-of-the-line. 64-gun ships-of-the-line were unavailable, so three small 74s were converted – *Saturn*, *Majestic*, and *Goliath*. These ships mounted 32-pound long guns on the main deck. They were as much of an overmatch for a Humphreys frigate as the Humphreys frigate was for the standard 18-pound 38-gun British frigate. Completed in 1813, they were patrolling the North American coast by 1814.

“Gradual Increase”

On April 29, 1816 the United States Congress passed an “Act for the Gradual Increase of the Navy of the United States.” It authorized construction of nine frigates. Their keels were laid between 1816 and 1826, although several were not finished until the 1840s and 1850s. These “Gradual Increase” ships, and three other heavy frigates added later, were the last and finest sailing frigates built for the United States Navy.

A combination of parsimony and preparedness marked the United States Navy between 1815 and 1860. The tardy completion and rapid decay of the *Guerriere* class demonstrated the difficulty of building major warships during wartime. Ships retained in reserve quickly rotted at their moorings. Congress was unwilling to allocate sufficient funds to complete all the ships it authorized.



The *Cumberland*, as launched, is shown in this Currier and Ives print. (LOC)

The Navy built these ships slowly and carefully, completing frigates when they were needed for active service. Surplus hulls were partially completed, decked over, and left on the building slip. They could be rapidly completed if war broke out, protected from the elements until then. All were built from live oak, carefully chosen for strength. In so far as the ships completed were well built and durable the plan was successful. However, the long delay meant that the final frigates launched were obsolete when their keels first touched water.

Designed as a class, the ships varied significantly between the first launched craft and the last – reflecting 30 years of progress in naval architecture. All were large craft – 175 feet long between perpendiculars and 45 feet wide. *Potomac*, the first ship laid down and launched, had the centuries-old square stern, but *Brandywine* and subsequent ships were completed with elliptical sterns. This provided greater protection against a stern rake, and allowed large guns to be used as stern chasers. The frigates had solid bulwarks along the length of the spar deck, without the gap found amidships in the earlier classes. The forward bulkheads were also planked up, the sheer reduced, and the stem straightened.

Potomac and *Brandywine* were commissioned in the 1820s. One frigate was completed in the 1830s – *Columbia*. Four were completed and commissioned in the 1840s – *Raritan*, *Savannah*, *Cumberland*, and *St Lawrence*. By the middle of that decade it was obvious that the future lay with steam propulsion, not sail.

The final ships completed, the *Santee* and *Sabine*, were obsolete when launched. The idea of completing these as steamships was considered and rejected. Rather than simply scrap two fine hulls, yet unwilling to use a 30-year-old design, the Navy lengthened them 15 feet prior to completion, gaining two new obsolete 190-foot-long frigates, rather than two obsolete 175-foot frigates.

“Gradual Increase” frigates were heavily armed. Initially they were given

24-pound guns on the gundeck, and 42-pound carronades on the spar deck. However, in the 1820s and 1830s developments in ordnance led to all heavy frigates, including the surviving older ones, being rearmed with a main battery of 32-pound long guns. These 32-pounders, thinner and slightly shorter than the Napoleonic-era 32-pounder, were still heavier than the 24-pound guns originally used. The older frigates substituted 32-pound carronades for 42-pound carronades, keeping the total weight of metal close to the weight carried during the War of 1812. Some

USS *Independence*, unsuccessful as a ship-of-the-line, proved a success as a razeed frigate.
(NHF)



"Gradual Increase" frigates were similarly armed. This allowed the ship to carry only one size of ball, simplifying logistics. Shell-firing 8-inch Columbiads were later added to the mix. These were medium-length guns with tremendous destructive power.

The final frigates

The United States Navy added three heavy frigates after 1826 – *Hudson*, *Independence*, and *Congress*. The *Hudson* was originally built for the Greeks as *Liberator* in 1828. But as Greek naval ambitions exceeded their ability to pay, the builders convinced their Congressional representatives to purchase the ship for the United States Navy. The purchase gave the Navy a frigate for which it had little need and less desire.

The *Hudson*, 177 feet long, had a hull conforming to mercantile needs rather than naval practice – blunt forward, square aft, and built for carrying capacity rather than sailing quality. Additionally it was built of white oak, and proved weak.

The *Independence* was different. The first ship-of-the-line completed for the American Navy, it was begun during the War of 1812. It possessed excellent sailing qualities, but its lowest gunports were only 3ft 10in. above the waterline – useless in a rough sea. After one commission as a ship-of-the-line, the *Independence* sat in harbor. In 1836 it was razed to a large frigate – the largest in the Navy. The conversion was successful. The gunports were now seven feet above the water. The ship proved a fast – if stiff – sailer. As a frigate, *Independence* kept the main battery and masts of a ship-of-the-line, providing the Navy with 20 years of useful service.

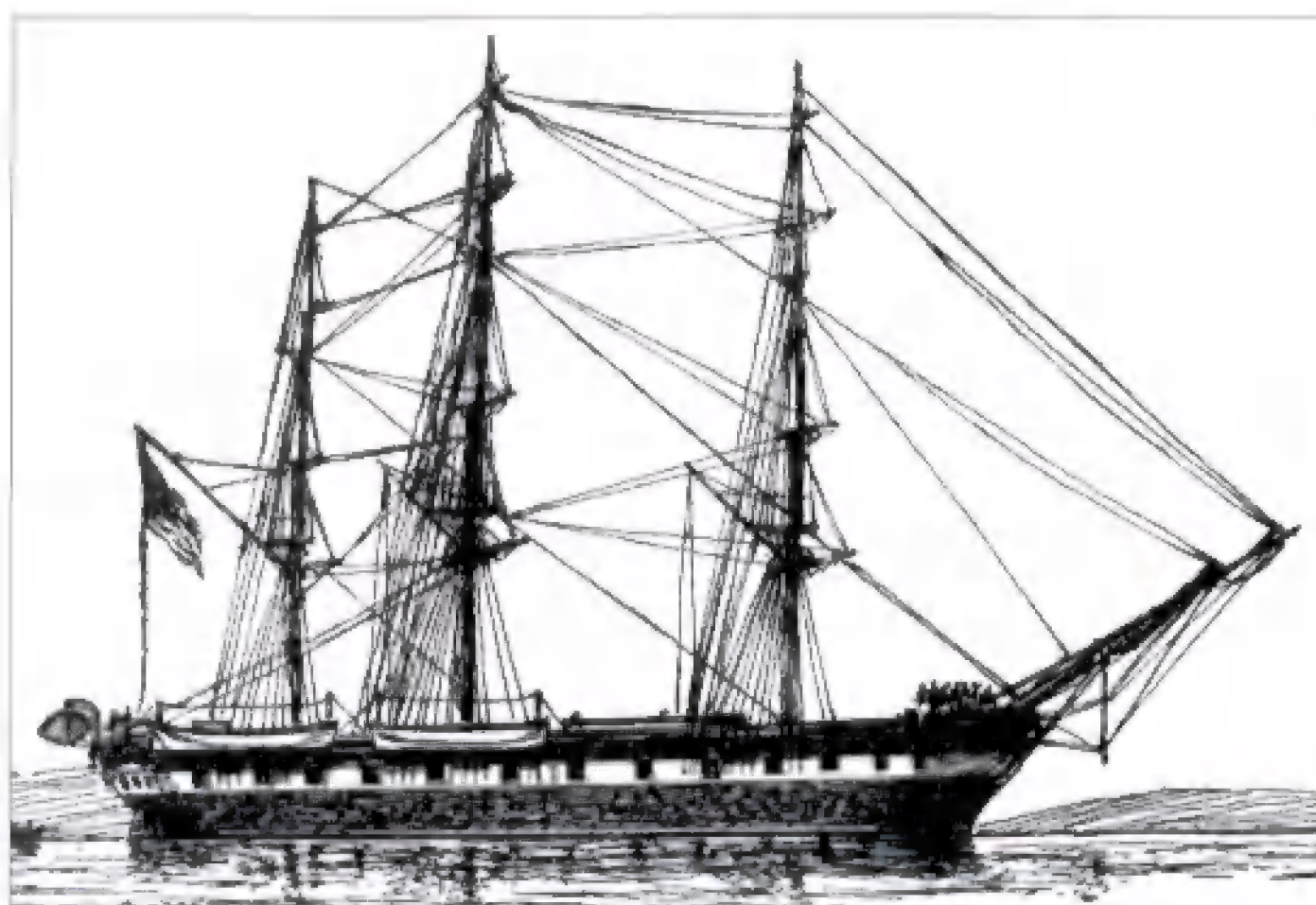
The *Congress* replaced the earlier Humphreys-designed 36-gun frigate. As with other light frigates, the original *Congress* was less durable than the large frigates. When the old *Congress* was condemned in 1841, it was replaced with a new frigate of the same name under the guise of "rebuilding" – using maintenance money for new construction.

The *Congress* represented the apogee of the heavy sailing frigate. Displacing 1870 tons and 179 feet long, except for the *Independence*, it was the largest sailing frigate in the United States Navy. It combined excellent speed, sea-keeping qualities, and firepower.

OPERATIONAL HISTORY

Early years – the Quasi-War and Barbary Wars

The *United States* and *Constitution* were launched at the beginning of America's first foreign war, the undeclared Quasi-War with France. In 1797 France seized American merchant ships carrying cargoes to France's enemies. The French Directorate then issued a decree stating that neutrals, including United States citizens, serving on foreign warships inimical to France were pirates, even if serving involuntarily. This meant that an American seaman impressed (summarily drafted)



The *Congress* was the last sail-powered frigate designed and built for the United States Navy. Launched in 1842, it was the pride of the Navy until sunk by *CSS Virginia*. (AC – Our Navy)

John Barry, American naval hero from the Revolution, was the first captain appointed to the United States, the first American warship commissioned since the Revolution. (AC – Naval War with France)





The *Constitution* remained an important member of the United States Navy for over 40 years, remaining a first-line warship into the early 1850s. (LOC)

into the Royal Navy could be hanged if captured by the French.

Negotiations broke down, and Congress authorized military action against France. Three frigates – the 44-gun *United States* and *Constitution*, and the smaller *Constellation* – had just been launched and were entering service.

The *United States* was commissioned first. John Barry, one of the few successful captains of America's Revolutionary Navy, was its first captain. Barry then commanded the frigate *Alliance*, the largest – and virtually the only – Revolutionary frigate to escape the Royal Navy. The *Constitution* joined *United States* a few months later, initially commanded by Samuel Nicholson.

During the Quasi-War neither was particularly successful. The *Constitution* took only three prizes. The *United States* captured three French privateers, all small schooners. It was the luck of the draw, not deficiencies in the ships – they simply failed to encounter large French warships. The smaller *Constellation* became the war's star frigate, capturing *L'Insurgente*, a 40-gun frigate, and defeating the *Vengeance*, a 44-gun frigate carrying 18-pound guns. Another American light frigate, the 32-gun *Boston*, took a small 24-gun French frigate, *Le Berceau*.

The big frigates proved satisfactory despite some problems. Both rolled badly in a head sea and their rigging proved deficient. Both ships sprung their bowsprits in storms. Their captains tinkered with the position and sizes of the masts, attempting to improve their performance and speed. While they could sail away from other American warships during stiff winds, they proved sluggish in light airs. The *United States* soon gained the nickname "Old Wagon."

The *President* joined these ships in 1800. Commanded by Thomas Truxtun, *Constellation's* captain during its victories, it had a short uneventful war. The *President* was on station for six months before the Quasi-War ended. It proved the fastest of the first three 44-gun frigates. In part, this was due to its construction, but was also due to Truxtun's seamanship.

As the Quasi-War wound down, Tripoli, a Barbary state, declared war on the United States. In response the United States sent a squadron to the Mediterranean, and between 1801 and 1807 committed most of its active navy to suppressing Barbary aggression. A 44-gun frigate always served as a flagship.

The *United States* sat out the Barbary Wars in reserve. As the oldest frigate, it was decommissioned in 1801 and refitted in 1806. The *President* took the first tour of the Mediterranean, where it served largely uneventfully, participating in the bombardment of Tripoli in 1804. It had 22 12-pound long guns on its spar deck during this period, rearmed with 42-pound carronades only after it returned to the United States in 1806.



Constitution, initially laid up after the Quasi-War, was recommissioned in August 1803 and sent to the Mediterranean where it served as the flagship. It saw considerable action against Tripoli, mainly shore bombardment and escort work. During this period it constantly changed its armament. At one point it carried 36 24-pound long guns, by mounting six on its quarterdeck, along with 16 12-pound guns. Later, it carried six 32-pound carronades.

Through much of its Mediterranean service, Captain Edwin Preble commanded the *Constitution*. Preble in the Barbary Wars and Truxtun in the Quasi-War established the traditions that guided America to victories in 1812. Both set high standards of seamanship, gunnery, and leadership – standards emulated by their subordinates.

Preble made preparedness a watchword. When a Royal Navy warship challenged the *Constitution* in 1803, Preble's ship was ready to fight. He forced the British to back down. When HMS *Leopard* challenged the *Chesapeake* in 1807, James Barron's ship was unprepared and yielded to the British. Preble's challenger was the smaller frigate *Maidstone*, surprised by a strange warship on a moonless night and trying to buy time, but Preble believed he was going to fight a ship-of-the-line when he ordered his men to their guns. The *Maidstone's* officer-of-the-watch claimed his ship was the 80-gun *Donegal*.

Following peace with Tripoli, the *Constitution* returned to the United States in 1807 and was laid up for the next two years.

The War of 1812

Resentment between Britain and the United States over the issues of neutral rights and Royal Navy impressment of United States citizens grew following the end of the Quasi-War with France. War with England became virtually inevitable after *Chesapeake*, sailing for the Mediterranean, was forcibly stopped by a British warship and searched for Royal Navy deserters.

American outrage almost led to war. London, stretched to the limit against Napoleon, defused the situation. Britain eventually released

Bombardment of Tripoli during the Barbary Wars. Both *Constitution* (foreground) and *President* (behind *Constitution*) participated. (LOC)

Edwin Preble commanded the *Constitution* and the American forces in the Mediterranean during the Barbary Wars. His example of preparedness, pugnacity, and professionalism helped mold the United States Navy. (LOC)





Increasing tensions between the United States and Britain following the *Chesapeake* incident exploded in 1811. When the Royal Navy sloop *Little Belt* failed to identify itself adequately to Commodore John Rodgers aboard the *President*, gunfire resulted. (USNA-R)

On May 14, 1811 USS *President* encountered a British warship at night off the New York coast. Initially neither ship knew the other's identity. Words were exchanged, then shots. A fight ensued. Daybreak revealed a badly battered 22-gun British sloop-of-war, the *Little Belt*. Commodore John Rodgers expressed regrets and let the sloop crawl back to Halifax. What really happened is still a guess. It is likely that *Little Belt's* commander tried a bluff similar to the *Maidstone's*, and the pugnacious Rodgers called it. Royal Navy captains vowed revenge, but Rodgers, uncowed, painted the *President's* name in large letters on its foretopsail.

On June 18, 1812, the United States declared war on Britain. The precipitating cause – the Orders in Council to which America objected – had been rescinded earlier, but word had not reached Washington. Despite declaring war, the United States was unprepared. Only six frigates were ready for sea. The three 44s carried the load in 1812.

The war opened with virtually the entire American Navy sailing as a squadron, consisting of the *President*, *United States*, the 36-gun frigate *Congress*, and two sloops-of-war. Led by Commodore Rodgers it swept the Atlantic in search of a British convoy reportedly bound for the West Indies. The Americans instead found the 36-gun frigate HMS *Belvidera*, whose crew were unaware that their nations were at war. The Americans' hostile intentions were clear, and the *Belvidera* sensibly turned and fled.

The slower ships fell astern until only the *President* was within range of the *Belvidera*. As the *President* drew within pistol-shot of the *Belvidera's* port quarter a chase gun burst. The explosion killed or wounded 16. Commodore Rodgers was injured while laying the gun. In the confusion the *Belvidera* evaded its pursuers and returned to Halifax.

A squadron immediately sailed from Halifax in search of the American squadron. Consisting of the *Africa* (64) and four frigates, it instead found the *Constitution*. A three-day pursuit of the American frigate followed. The *Constitution* escaped using a combination of consummate seamanship and luck. Its captain, Isaac Hull, took the ship safely into Boston.

the sailors seized, but the incident poisoned British-American relations. The United States government instituted patrols off the American seaboard to protect its merchant shipping, and the *United States*, *Constitution*, and *President* were recommissioned. They now carried 26 guns on their spar decks. A pair of long 24-pounders on the forecastle served as chase guns. The *United States* and *President* filled out the spar deck with 42-pound carronades, whereas the *Constitution* typically carried 32-pound carronades.

There Hull learned that his uncle, General William Hull, had surrendered the American Army at Detroit. Rumors were flying that Captain Hull would be sacked. Fearing blockade – or relief – Hull sailed from Boston without orders. Cruising off Canada, he encountered HMS *Guerrieré* returning to Halifax for a badly needed refit. A standard British 38-gun heavy frigate with a main deck battery of 18-pound long guns, it was a French prize. Undermanned, it was no match for the larger *Constitution*. However, by 1812 Royal Navy warships had been capturing larger enemy ships for 20 years, so *Guerrieré's* captain, James Dacres, immediately engaged.

By sunset, August 18, the United States Navy won its first major victory of the war. Hull outmaneuvered Dacres throughout the battle. The British ship fired faster than the American frigate, three broadsides to every two, but the American shots hit their target more often and with heavier shot. The *Guerrieré* ended as a wreck while the *Constitution* was hardly damaged. Hull sank his prize and returned to Boston.

Two months later on October 11, the *United States*, sailing alone, encountered another British frigate, HMS *Macedonian*, near Madeira. The *Macedonian* was another standard 18-pound frigate, but unlike *Guerrieré* was practically new, launched in 1810. The British ship held the weather gage, letting it choose when to engage, and had a captain, James Carden, determined to prove that the *Constitution's* victory had been mere chance.

This battle ended like the first, with the British not just defeated, but outfought. The *United States* was commanded by Captain Stephen Decatur, a hero of the Barbary War and possibly the United States Navy's best tactician. Carden fought bravely, but without thinking. Decatur, equally brave, out-thought his opponent during the fight, allowing Carden to fight a long-range gunnery duel in which the *United States's* superior weight and range soon told.

After shooting to pieces the *Macedonian*, Decatur let his opponent close and then raked the enemy ship. Finally, he maneuvered the *United States* in front of the *Macedonian*, so that it could fire its entire broadside unopposed by the British. He then held his fire, allowing time for the *Macedonian's* officers to realize the hopelessness of their position. Decatur then called on the British to strike, ending the battle with a relatively undamaged prize and no further casualties on either side.

Decatur repaired his prize and sailed it to an American port. He dispatched his first lieutenant, William Allen, and midshipman Archibald Hamilton – the Secretary of Navy Paul Hamilton's son – to Washington with a victory report and the *Macedonian's* battle ensign.



Paul Hamilton, Secretary of the Navy at the beginning of the War of 1812, ignored calls to use the big frigates for harbor defense, ordering them to sea instead. His son was a midshipman aboard the *United States* when it captured the *Macedonian*. Stephen Decatur sent First Lieutenant Archibald Midshipman Hamilton to Washington with the *Macedonian's* flag. Hamilton presented it to first lady Dolly Madison at a White House ball. (NHF)

Immediately following the American declaration of war an American squadron that included the *President* and the *United States* commanded by Commodore Rodgers sought British warships. They found HMS *Belvidera*, which escaped after a long chase. (USNA-M)





Royal Navy frigates routinely defeated larger warships through the Napoleonic era. When the *Guerrieré*, itself a prize captured from the French, encountered the *Constitution*, it immediately engaged. Within an hour the American Navy had won its first major victory of the war. (USNA-M)

A few weeks after the *Constitution* had bested the *Guerrieré*, the *United States* encountered the *Macedonian*. Stephen Decatur, commanding the American frigate, used the superior range and weight of his 24-pound battery to defeat the *Macedonian* while suffering only minimal casualties on his own ship. (NHF)



Finally in December 1812, the *Constitution* fought and won a third single-ship duel. Commanded by Commodore William Bainbridge (Hull had been superseded upon returning to Boston), it was on a cruise that took it to South America. There it encountered HMS *Java* (38), another standard British heavy frigate. As with *Guerrieré*, *Java* was a prize ship, the former French *Renommée*. Henry Lambert, the *Java*'s captain, knew he faced long odds. But *Java* was carrying extra personnel to the East Indies, and the *Constitution* was a long way from home. An opportunity to cripple a Yankee frigate was worth risking battle.

Java shot away the *Constitution*'s wheel early in the action, then raked it from astern, but the *Constitution*'s heavy construction allowed it to absorb this punishment. Bainbridge soon regained control of his ship. The American's heavier armament began to tell on the *Java*, which was soon dismasted. Damaged itself, the *Constitution* withdrew, repaired its rigging, then returned, placing itself across *Java*'s bow. Unable to maneuver, with one-third of his crew casualties, Lambert surrendered. Bainbridge burned his prize, and returned to Boston.

The first two defeats could be attributed to British unpreparedness and underestimation of their enemy but *Java* underscored the superiority of large American frigates. A well-led British 38, armed with 18-pound guns, could not reasonably expect to emerge victorious from an action with one of Humphreys' large frigates, given average American leadership.

The Admiralty's response was swift, appropriate, and effective. Orders went out that individual Royal

Navy frigates were not to engage an American 44. Instead, pairs and groups of frigates sailed together to ensure victory. The Admiralty also ordered large frigates armed with 24-pound or 32-pound long guns that overmatched the Yankee ships. They gave these to their best officers, men like John "Magnificent" Hayes. Hayes gained his nickname when, while captain of the *Magnificent* (80), he clawed the ship off a lee shore in a storm through superlative seamanship.

Finally, the Royal Navy instituted a strict blockade of the American coast, bottling the United States Navy in port. The *United States* made two unfruitful voyages, and *President* and *Constitution* spent much of 1813 and 1814 at anchor, unable to break out. But both sailed in 1815. The *Constitution* escaped first, slipping the blockade at Boston in late December 1814. On February 20, 1815, about 200 miles southeast of Madeira *Constitution*, now commanded by Charles Stewart, sighted two British warships. The ships, *Cyane* (22) and *Levant* (18), were large sloops-of-war, armed almost exclusively with carronades. The combined broadsides of the two British ships outweighed *Constitution*, but *Constitution's* 24-pounders outranged the British ships. Stewart's real challenge was taking both ships, rather than just one.

Five years earlier, two similar vessels had fought a 40-gun French frigate to a draw. *Cyane* and *Levant* now attempted to duplicate the feat. What proved successful against an ill-trained French crew ended in defeat against the well-drilled sailors of the *Constitution*. Stewart soon had two prizes.

Attempting to bring both back to the United States he was surprised in Porto Praya a few weeks later. The British force included the *Leander* and *Newcastle* – ships built to beat the American 44s. Stewart lost *Levant*, but slipped away with *Cyane* and *Constitution*. But the *President* was less fortunate. It slipped out of New York during a snowstorm in January 1815. Deeply laden, the frigate grounded leaving port. Stranded for an hour, its keel was strained, and its trim destroyed. The wind prevented its captain – Stephen Decatur, who earlier commanded the *United States* – from returning.

Decatur's troubles were only just beginning. Magnificent Hayes commanded the British blockading New York. Blown off station, he took his squadron – including the razee *Majestic* (56), and the 24-pound frigate *Endymion* – to where he expected *President* to be if it escaped during the storm. Decatur was there in a damaged warship. He almost escaped. Only *Endymion* matched *President's* speed. Decatur fought, stripping the sails and spars from *Endymion*. *President* slipped away, but *Endymion* damaged *President* enough to slow it. Two other British frigates,



The *Constitution* encountered and defeated HMS *Java* off the South American coast. Painted by noted marine artist Nicholas Pocock, this oil painting depicts the climax of the battle. (USNA-M)

William Bainbridge, who surrendered the sloop-of-war *Retaliation* to the French in the Quasi-War, was forced to use the frigate *George Washington* as a transport for the Dey of Algiers, surrendered the *Philadelphia* to Tripoli, and almost left the Navy for merchant service. However, by capturing the *Java* he retrieved a previously mediocre career to become one of the stars of the young American Navy. (AC – Frigate *Constitution*)



Huzza! Old Iron Sides

No.

3.



The USS Constitution.

THE Constitution's glory!
Her crew as bold and brave!
Are fam'd in brilliant story!
Our rights defend and save.
Who rose to every duty,
For their country's honor fought;
While others, wealth, fame, and beauty,
Reward them with delight.
Ahoy! my boys, superior!
Weigh anchor—nothing fear,
Our enemy's inferior!
Then fight, for all this dear.

Wasn't Hull a Nelson? tell me,
With three close-guns and mumps;
To "clear off"—sloops, and quail ye,
While grim Britannia weeps!
By the noble Constitution,
Was captured the *Guerriere*;
John Bull's complete confusion,
Huzza! my boys—nothing fear.
Ahoy! my lads, superior!
Glorious Hull's deserving praise,
Your enemy's inferior!
Huzza! for better days!

Huzza! for William Bainbridge,
Who on Brazilian coast,
The pride of Africa—Java hinch,
The Constitution's second boast.
Who after a smart beating,
Gave up on her iron sides;
For sailing off her beating,
To the distant seas she goes.
Ahoy! my boys, superior!
Pass round the flowing can,
Your enemy's inferior!
A piece—for every man.

At the Madeira station,
Two cruizers bore a sight;
Our Captain made the motion,
My boys! 'tis time to fight!
Now let us prove with spirit,
And show Britannia's force;
That Yankee ships are worth,
That men to one are more.
Ahoy! my boys, superior!
Our duisters shall proclaim
Our enemy's inferior!
Huzza! for Naval Fame.

We came into an action,
Two ships along side side,
Our hulls were told by friction,
From honest iron-side.
Our hulls they cry'd with spirit,
We'll give you balls—by heart!
Shall prove to you the merit,
Of Commodore Stewart.
Ahoy! my boys, superior!
Three cheers—for every man;
Our enemy's inferior!
We'll beat them two to one.

After fifty minutes fighting,
They "Jah" gave up the ship;
"Old Iron-side" was calling,
Hull scarcely lost a chip.
While the sloops, *Levant*, *Cypre*,
Li less than in an hour;
Acknowledg'd on the Main,
Columbia's Naval Power!
Ahoy! my boys, superior!
True huzza now comes,
Your enemy's inferior!
"Free trade and sailors' rights".

Pomone and *Tenados* – 18-pound heavy frigates – caught the crippled *President* that night and forced its surrender.

None of these 1815 battles mattered, although that did not restore the lives or ships lost. Peace had been signed on Christmas Day in 1814 on the basis of the status quo ante bellum.

The heavy frigate era

The end of the Napoleonic Wars changed the frigate. Adversaries tended to be pirates and slavers in small ships, or minor non-European powers, such as the Barbary states or the myriad independent American nations that sprang up after the Spanish empire collapsed. This left the real work to be done by frigates and sloop-of-war. Large frigates and light fast sloops gave the best mix for an effective fleet.

The first challenge came immediately after the War of 1812 ended. The Barbary powers – notably Algiers and Tripoli – took advantage of the war to resume their depredations against American merchant shipping. The United States responded by sending two squadrons – centered upon the large frigates – under the commands of Bainbridge and Decatur to the Mediterranean.

Decatur, operating with his customary speed, arrived first and presented American demands to Algiers. When the Algerians chose to fight, the American squadron – including the *Constitution* and the war-built USS *Guerriere* – destroyed the Algerian fleet. Decatur, aboard the *Guerriere*, set the example by taking it into action against the enemy's flagship, the frigate *Meshuda*. Tripoli made peace without further fighting, but the United States – wary of the Barbary states – maintained strong forces in the Mediterranean throughout the 1820s. This squadron typically included two large frigates.

Throughout the 1820s and 1830s the heavy frigate served to project American power throughout the globe. Typically two or three frigates were stationed in South America to protect United States interests, with the lighter frigates assigned to the shallower Caribbean.

Frigates were also sent wherever American interests were threatened. After Malay pirates massacred American sailors, the *Potomac* was dispatched with marines in a punitive raid. In 1831 this ship – the first-started "Gradual Increase" frigate and the second completed – sailed for Sumatra via the Cape of Good Hope. The ship returned in 1834, having circumnavigated the globe to reach and punish the Dyaks operating out of Kuala Batu.

As American interests expanded west, a Pacific Squadron was established in the 1840s. Among the ships joining it were the *United States*, rebuilt since the War of 1812, and transformed into one of the fastest frigates in the Navy. Herman Melville sailed with her on that cruise, and his experiences later became the basis for his novel *White Jacket*.

The Pacific Squadron played a major role during the Mexican-American War. At the time, *Savannah*, *Congress*, and *Independence*

The American victories over the Royal Navy fired the imagination of the American public. Songwriters quickly produced songsheets in celebration. (LOC)

formed the backbone of American power on the Pacific coast. They provided the nucleus of the force that conquered California. *Savannah* captured Monterrey in July 1846 and the *Congress* and *Independence* supported coastal operations with marine detachments and shore bombardment.

The Mexican-American War proved the apogee of the sailing frigate's influence. On the Gulf coast, the Home Squadron included the *Potomac*, *Raritan*, and *Cumberland*. While these ships saw no combat at sea – Mexico chose to keep its navy in port – they too provided invaluable support for the American invasion at Santa Cruz.

Mexico lacked a Paul Hamilton, willing to take on an enemy nation's apparently superior fleet. At the start of the Mexican-American War, Mexico's naval minister ordered the sale of Mexico's most modern frigates – *Montezuma* and *Guadaloupe*. Both were steamships, armed with large shell-firing guns, and *Guadaloupe* was iron-hulled. Either ship could have easily smashed a wooden-hulled "Gradual Increase" sailing frigate.

The Civil War and beyond

By the beginning of the American Civil War, several sailing frigates, including the *Constitution*, *Congress*, *St Lawrence*, *Santee*, and *Sabine*, were still serving as frigates. Two – *Savannah* and *Cumberland* – had been converted to sloops. Their obsolescence was brutally underscored in 1861, when a new type of warship, CSS *Virginia*, made its appearance.

Converted from the steam frigate *Merrimac*, undergoing a refit in Norfolk Naval Yard when that facility was captured by the Confederacy, *Virginia* was drastically altered. Stripped down to its berth deck, an armored citadel had been placed on the ship, protecting its guns from all but the heaviest shot. When it sailed into Hampton Roads on April 21, 1862, its first victims were the *Cumberland* and the *Congress*. Neither ship could penetrate the ironclad's armor. Both were destroyed – *Cumberland* suffering the further indignity of being sunk by ramming. The surviving ships were saved that day by nightfall, and the next day by the arrival of the *Monitor*, the first modern warship.

None of the frigates ended the war as warships. By 1865 they had been converted to store-ships, barracks ships, or training ships. *Constitution* and *Santee* were assigned to the United States Naval Academy; *Potomac*, *Brandywine* and *St Lawrence* served as storeships; *Sabine* became a training ship; and *Independence* was already a barracks ship at Mare Island in California.

The Civil War reduced the numbers of frigates dramatically. In addition to the *Cumberland* and *Congress*, four others were destroyed because of the war. *Columbia* and *Raritan* burned at Norfolk when the North abandoned the yard to the Confederacy. The *United States* should have been burned but survived, only to be sunk by the Confederates when they evacuated Norfolk. *Brandywine* burned while serving as a store ship.

The survivors disappeared in the 1870s and 1880s. By 1900 three were left. The *Constitution*, roofed over with a barn-like deckhouse, was a receiving ship at Portsmouth, Maine. The *Santee*



In the 1830 refit, a figurehead of Andrew Jackson replaced the *Constitution*'s billet-head. Despite protests, and an incident in which the figurehead was decapitated, Jackson remained on the ship throughout most of the rest of the 19th century. (AC – Frigate Constitution)

Forgotten today, the *Potomac*'s expedition against Malay pirates made the ship famous in the 1830s and 1840s. This drawing illustrated one of the many books and songsheets about its exploit. (LOC)

BATTLE OF THE POTOMAC



WITH THE MALAYS.



The *Savannah* at Rio de Janeiro in 1854, shortly before it was reduced to a sloop-of-war. This photograph shows the visual impact of the double-banked frigate. (NHF)

rotted at its moorings at the Naval Academy as a training ship. The *Independence* was still at Mare Island.

The *Constitution's* centennial in 1897 renewed interest in these ships. The Navy's celebrations for the *Constitution* were somewhat marred by the ship's ungainly appearance. It was decided to restore the ship as a symbol of naval heritage, and the deckhouse was removed in 1905. There was also talk of restoring *Santee*, but it sank in 1912. The ship was raised but then scrapped. The *Independence* was sold in 1914, leaving the *Constitution* as the last link with the original navy.

The *Constitution* was fully restored in the late 1920s, but to an appearance appropriate to the 1830s rather than its glory days from 1800 to 1815. The ship served as honorary flagship of the Atlantic fleet through the 1970s.

By the 1980s the *Constitution* was again in danger. It had hogged badly enough that the Navy worried that it might break in two. During the 1990s the Navy dry-docked the ship and rebuilt it to its War of 1812 appearance. The diagonal riders, originally installed but removed during an 1830s refit, were restored. Funds were raised for sails, and on the 200th anniversary of its launch, the *Constitution* sailed under its own power for the first time since the 1870s. It is now preserved in Boston Harbor.

THE SHIPS

Note on statistics: LBP is length between parallels – typically the distance between the stem and sternpost. This is probably the best approximation of the waterline length. Breadth is maximum breadth or width of the ship. Depth of hold measures the depth of the hold between the bottom of the ship and the berth deck. Draft is the loaded waterline. Displacement is given in long tons – the weight displaced by 35 cubic feet of salt water and is a traditional measure of weight for ships. Dates are as accurate as possible; in some cases – when the keel for the *President* was laid, for example – they are unknown and represent the author's best guess (indicated by a "?"). Values have been extracted from numerous sources, including *The Dictionary of American Naval Fighting Ships* (DANFS), Chapelle's *The History of the American Sailing Navy* and Caney's *Sailing Warships of the United States Navy*. DANFS is the primary source unless the facts presented are obviously wrong or contradicted by more reliable information.

Units are in English – feet, inches, tons, and pounds – reflecting contemporary United States Navy practice. Where information is unavailable (for example, draft and tonnage values for the *Independence* in standard sources are given for the ship as a ship-of-the-line, not a razee frigate), the author has calculated values from available information. While a best effort has been made to provide accurate information, the lack of uniformity in the shipbuilding industry – even within the United States Navy – means that values given are best-guess approximations.

Humphreys frigates

United States

Laid down: December 1794, Humphreys, Philadelphia

Launched: May 10, 1797

Commissioned: July 11, 1798

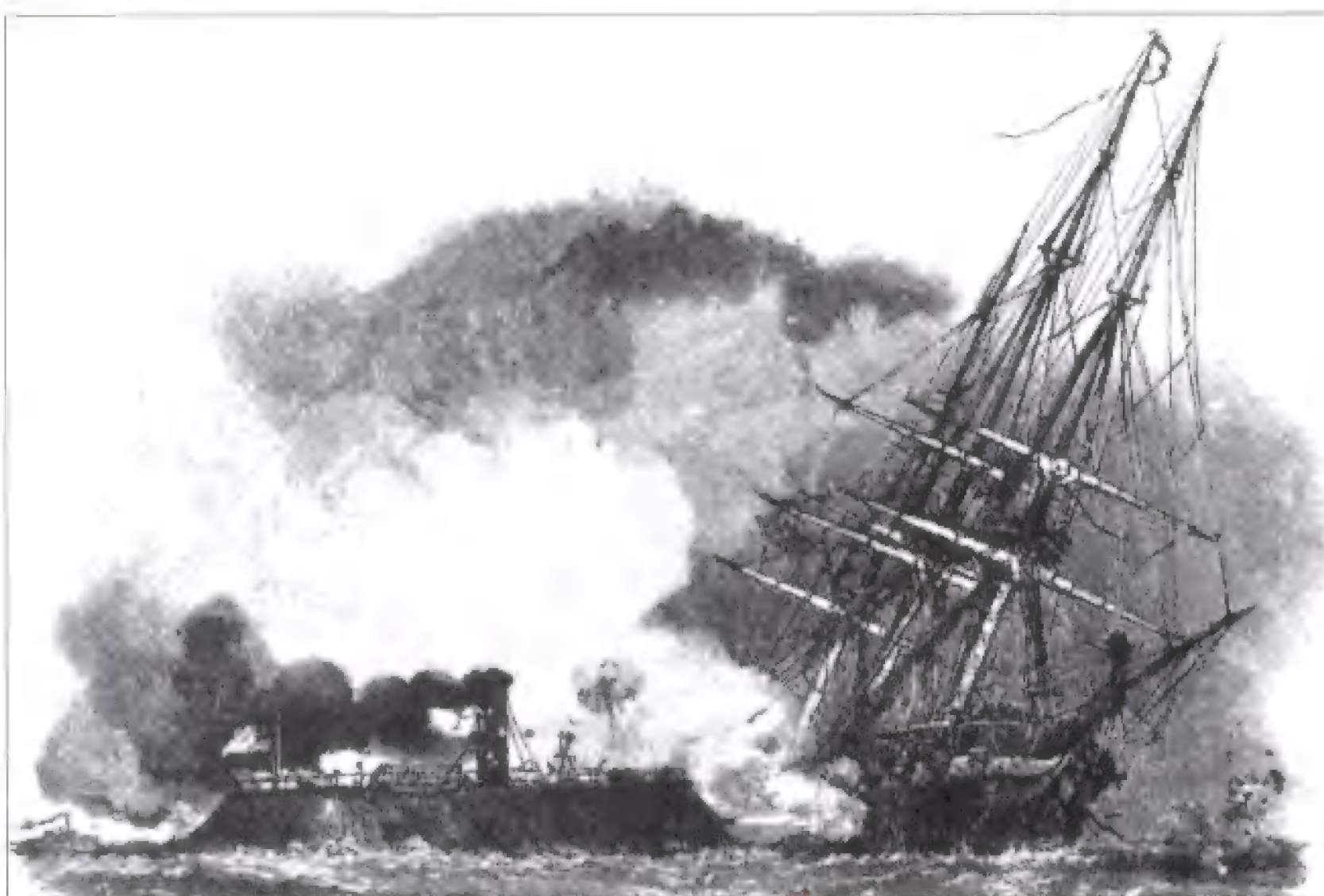
Dimensions – LBP: 175ft, Breadth: 43ft 6in., Depth of hold: 14ft 4in.,
Draft: 21ft 4in.

Standard complement: 365–450 men

Displacement: 1576 tons

Initial armament: 30 24-pound long guns, 14 12-pound long guns

History: The *United States* underwent a major refit in 1807. After service in the Quasi-War, and the War of 1812, it joined the Mediterranean fleet as part of Commodore Bainbridge's squadron. It returned to the United States in 1819. It was laid up between 1819 and 1824, and then served in the Pacific Squadron until 1827. It underwent a major refit in 1830–32. Thoroughly modernized, it was rearmed with 34 32-pound long guns and 20 32-pound carronades, and then made cruises of the Mediterranean, 1833–38, and home waters, 1839–40. Following an 1841 refit, the *United States* served as flagship for the Pacific Squadron, 1842–44. In reserve in 1845, it was assigned to the Africa Squadron to suppress the slave trade in 1846, and then served in European waters, 1847–48. It was placed in ordinary in Norfolk until 1861, but was abandoned when the Norfolk Navy Yard surrendered to the Confederacy in April 1861. It served as a Confederate receiving ship until scuttled in 1862, when the Confederacy abandoned Norfolk. It was then refloated, but finally broken up in December 1865.



The destruction of the *Cumberland* and *Congress* by the ironclad *Virginia* marked the end of the sailing-frigate era, and the dawn of the era of the iron warship. *Cumberland* sank almost instantaneously after being rammed by the *Virginia*. (AC – Battles and Leaders of the Civil War)

Constitution

Laid down: November 1794, Hart, Cleghorn, Boston

Launched: October 10, 1797

Commissioned: July 22, 1798

Dimensions – LBP: 175ft, Breadth: 43ft 6in., Depth of hold: 14ft 4in.,
Draft: 21ft 4in.

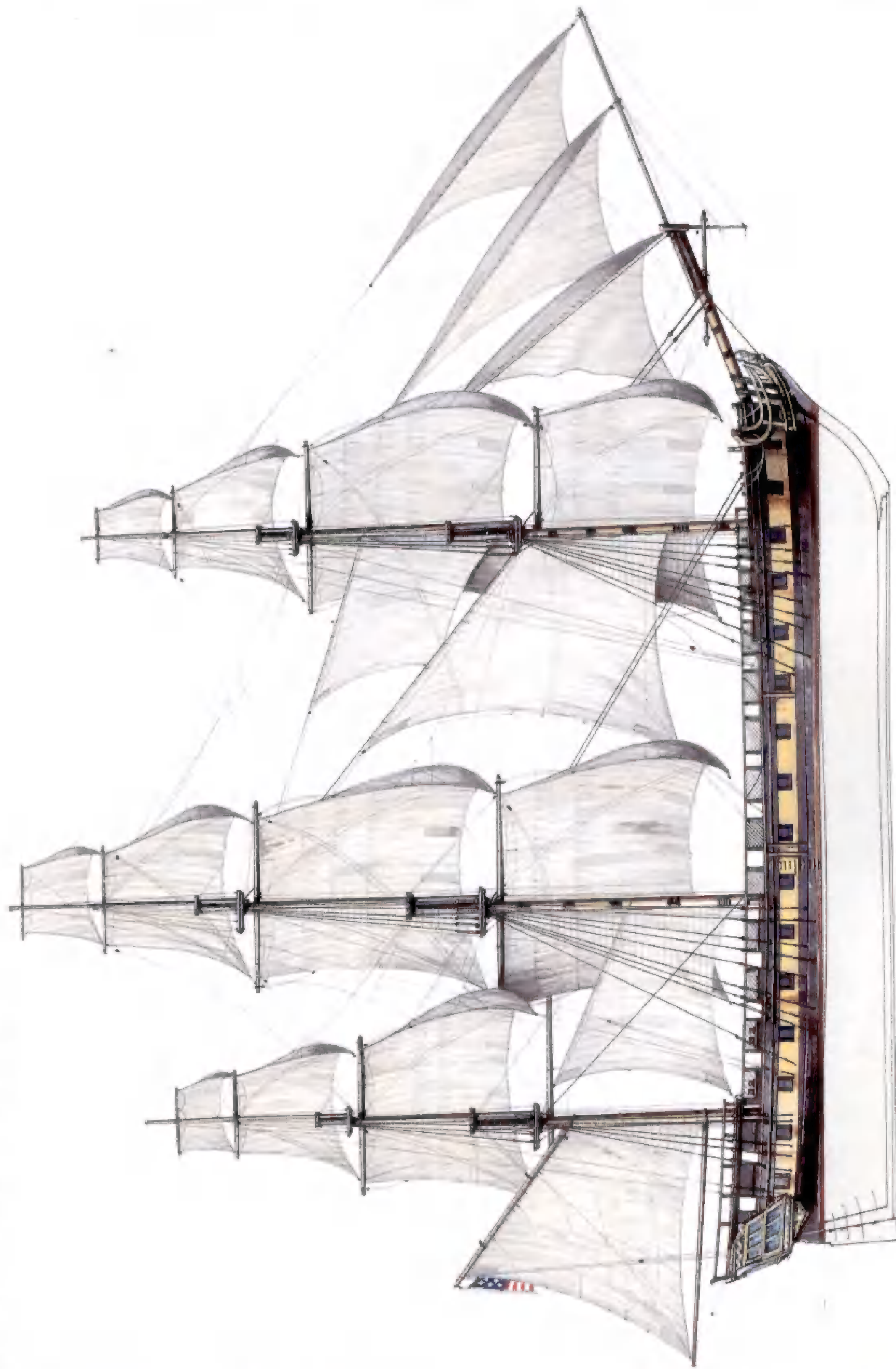
Displacement: 1576 tons

Standard complement: 450

Initial armament: 30 24-pound long guns, 14 12-pound long guns

History: Following the War of 1812, the *Constitution* was a popular command. It served seven three-year cruises between 1815 and 1860. It served in the Mediterranean four times – 1821–23, 1823–28, 1835–37,

A. USS *United States* – sail plan



B. USS Constitution evading the British fleet



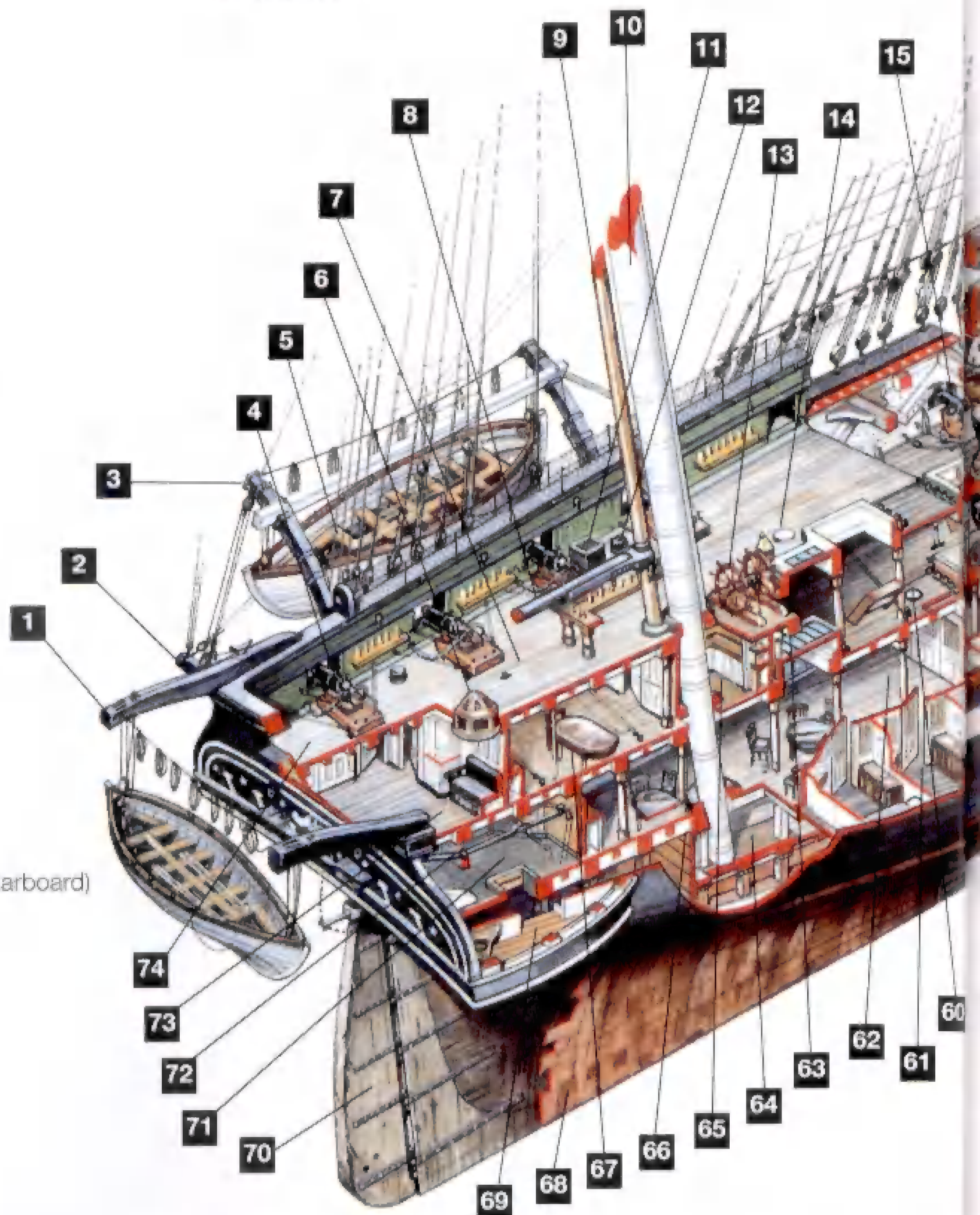
C. Gundeck of a Humphreys frigate

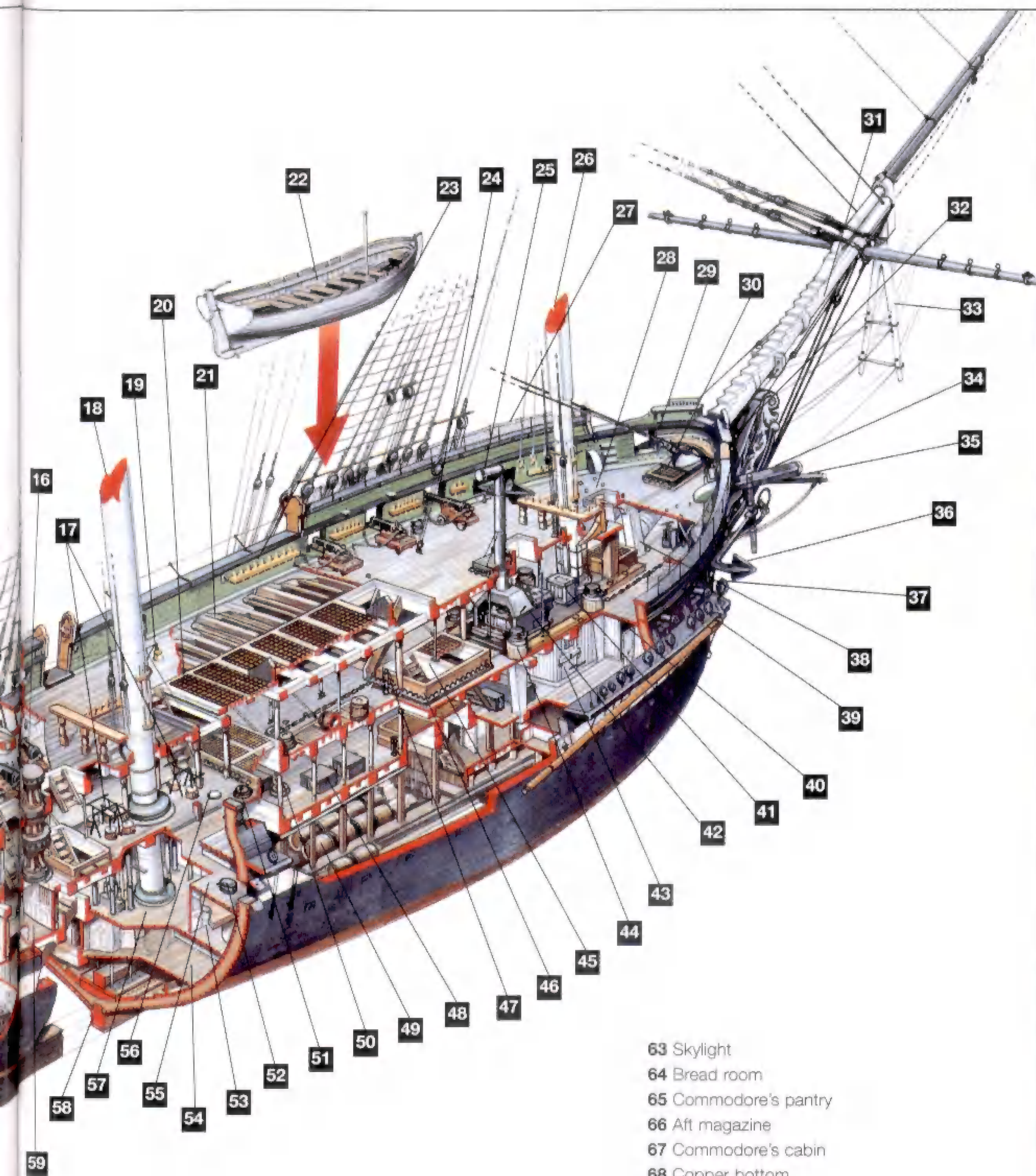


D. OLD IRONSIDES

KEY

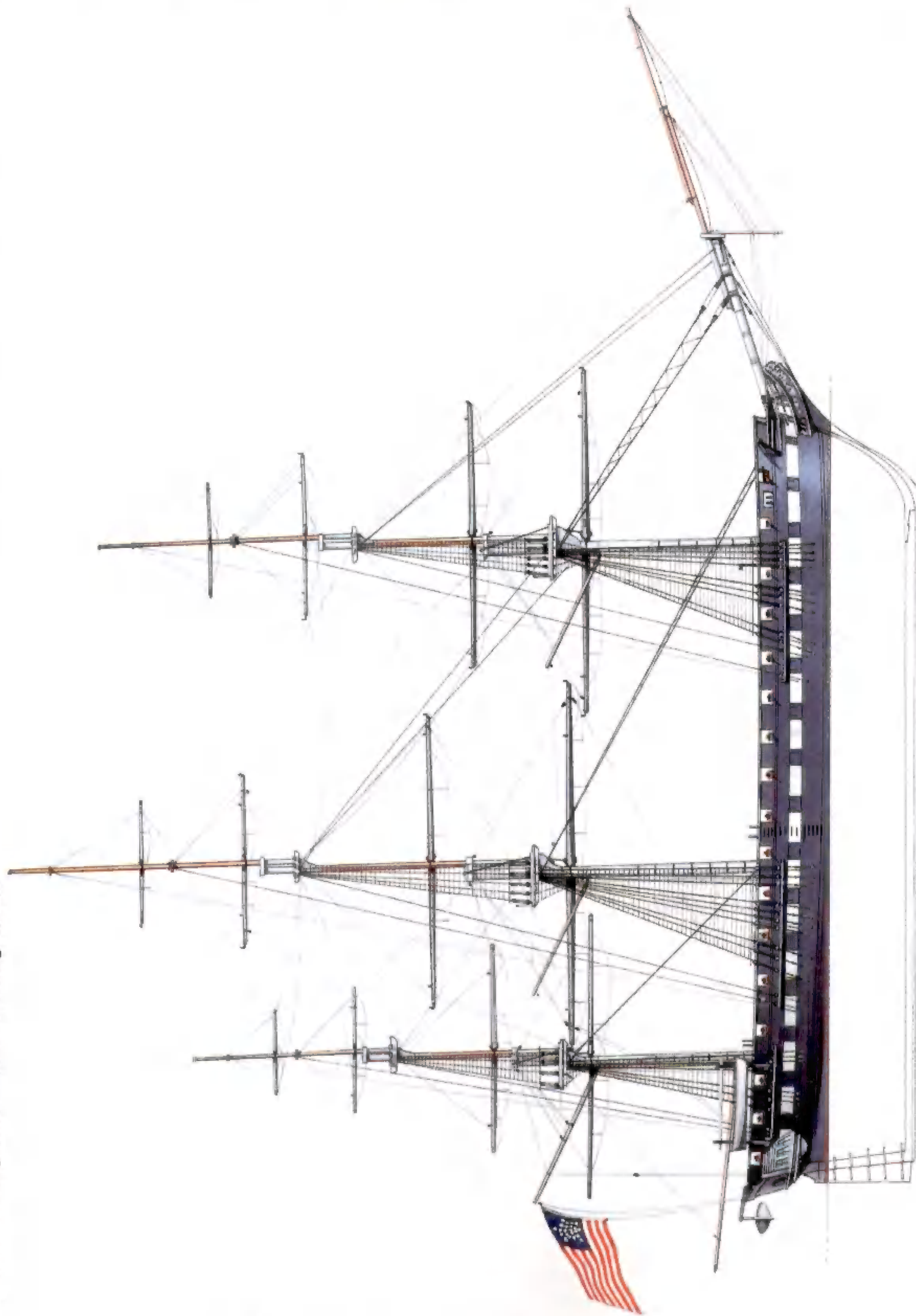
- | | |
|--|---|
| 1 Boat davits | 49 Main hold |
| 2 Main brace bumpkin | 50 Chain pipes |
| 3 Boat davits | 51 Chain pots |
| 4 32-pdr. carronades (20 on spar deck) | 52 Sponge tub (4 each side) |
| 5 28ft whale boats (3) | 53 Purser's issuing room |
| 6 Skylight | 54 Orlop deck |
| 7 Spar deck | 55 Gun deck |
| 8 Spencer boom | 56 Ammo. passing scuttles (6 on gun deck) |
| 9 Spencer mast | 57 Berth deck |
| 10 Mizzen mast | 58 Keel |
| 11 Horse block | 59 Steerage |
| 12 Sponge tubs (10) | 60 Deck lights |
| 13 Wheel | 61 Officer's quarters |
| 14 Ammo. passing scuttle (4) | 62 Ward room |
| 15 24-pdr. guns (15 each side) | |
| 16 Capstan | |
| 17 Bilge pumps | |
| 18 Mainmast | |
| 19 Ship's bell | |
| 20 Main hatch and boat skids | |
| 21 Spar deck beams | |
| 22 36-ft pinnace | |
| 23 Fife rails | |
| 24 24-pdr. bow chaser | |
| 25 "Charlie Noble" (galley smokestack) | |
| 26 Foremast | |
| 27 Hammock netting | |
| 28 Sheet bit | |
| 29 Mainstay dead eyes | |
| 30 24-pdr. shot stowage | |
| 31 Bowsprit | |
| 32 Crew's head (below) | |
| 33 Martingale | |
| 34 Cathead | |
| 35 Foretack bumpkin | |
| 36 Anchors (2 starboard, 1 port) | |
| 37 Rigging channels | |
| 38 Bowsprit bits | |
| 39 Lower studding sail boom (port and starboard) | |
| 40 Sick bay | |
| 41 Sink in scullery space | |
| 42 Galley wood stove | |
| 43 Brig-General store below | |
| 44 Chain bits | |
| 45 Hatch to berth deck | |
| 46 24-pdr. shot stowage | |
| 47 Fresh water pump riser | |
| 48 Chests | |





- 63 Skylight
- 64 Bread room
- 65 Commodore's pantry
- 66 Aft magazine
- 67 Commodore's cabin
- 68 Copper bottom
- 69 Quarter gallery
- 70 Rudder
- 71 Wardroom pantry and tiller room
- 72 Tiller
- 73 Commodore's aft cabin
- 74 Captain's state rooms

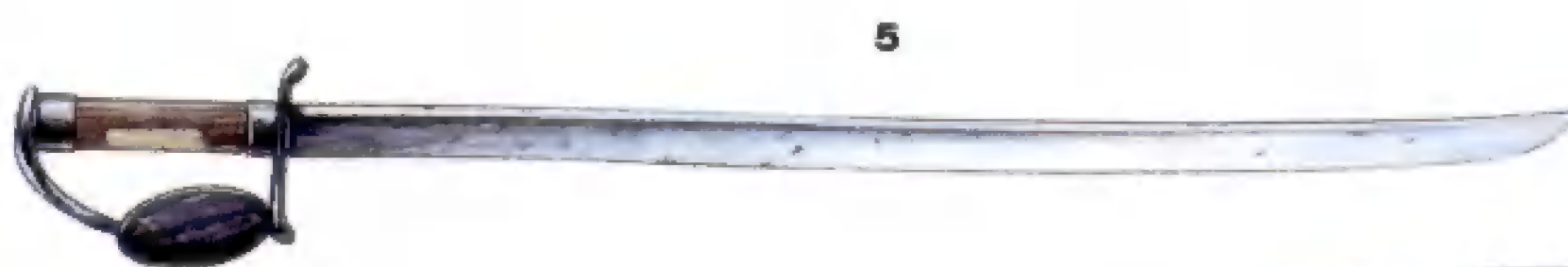
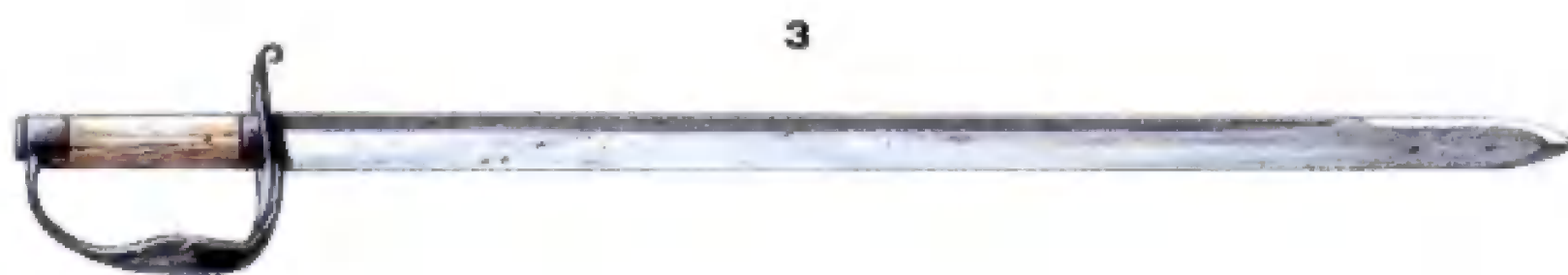
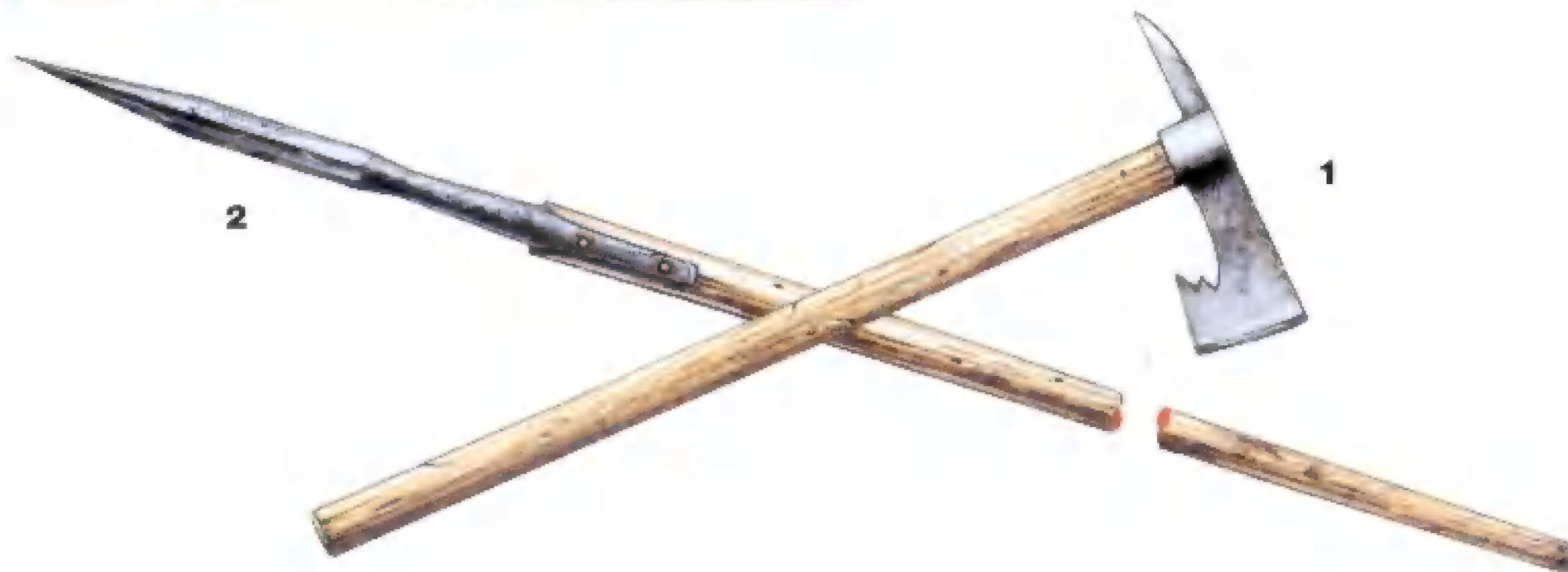
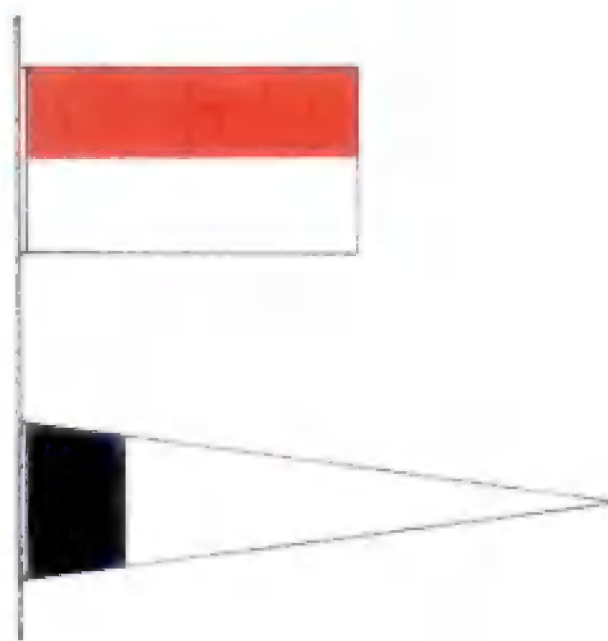
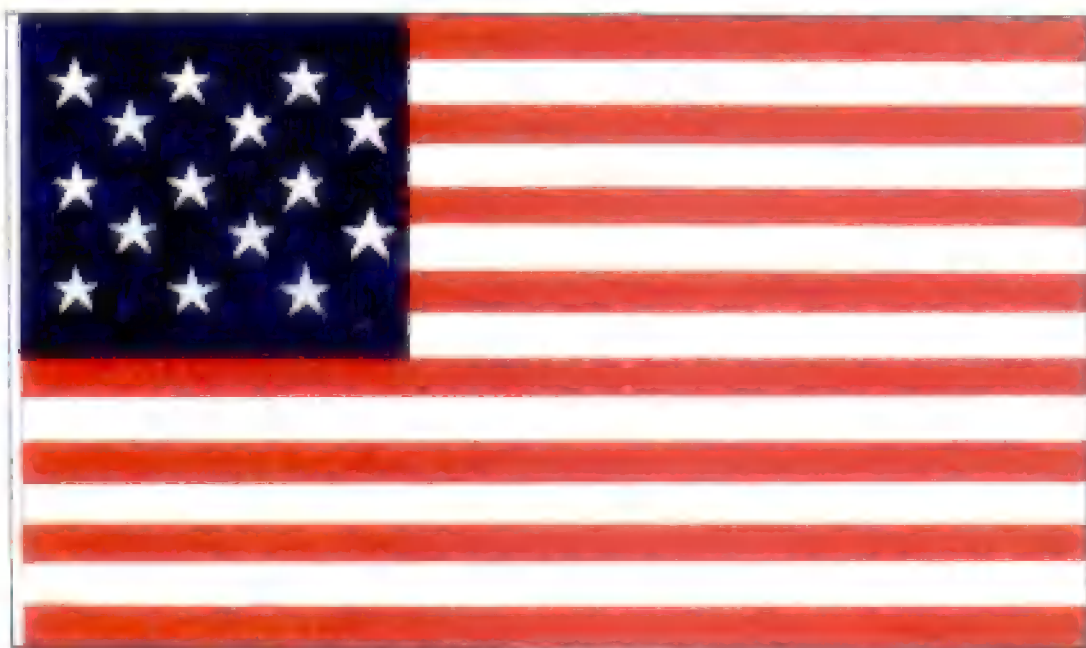
E. USS *Brandywine* - mast arrangement

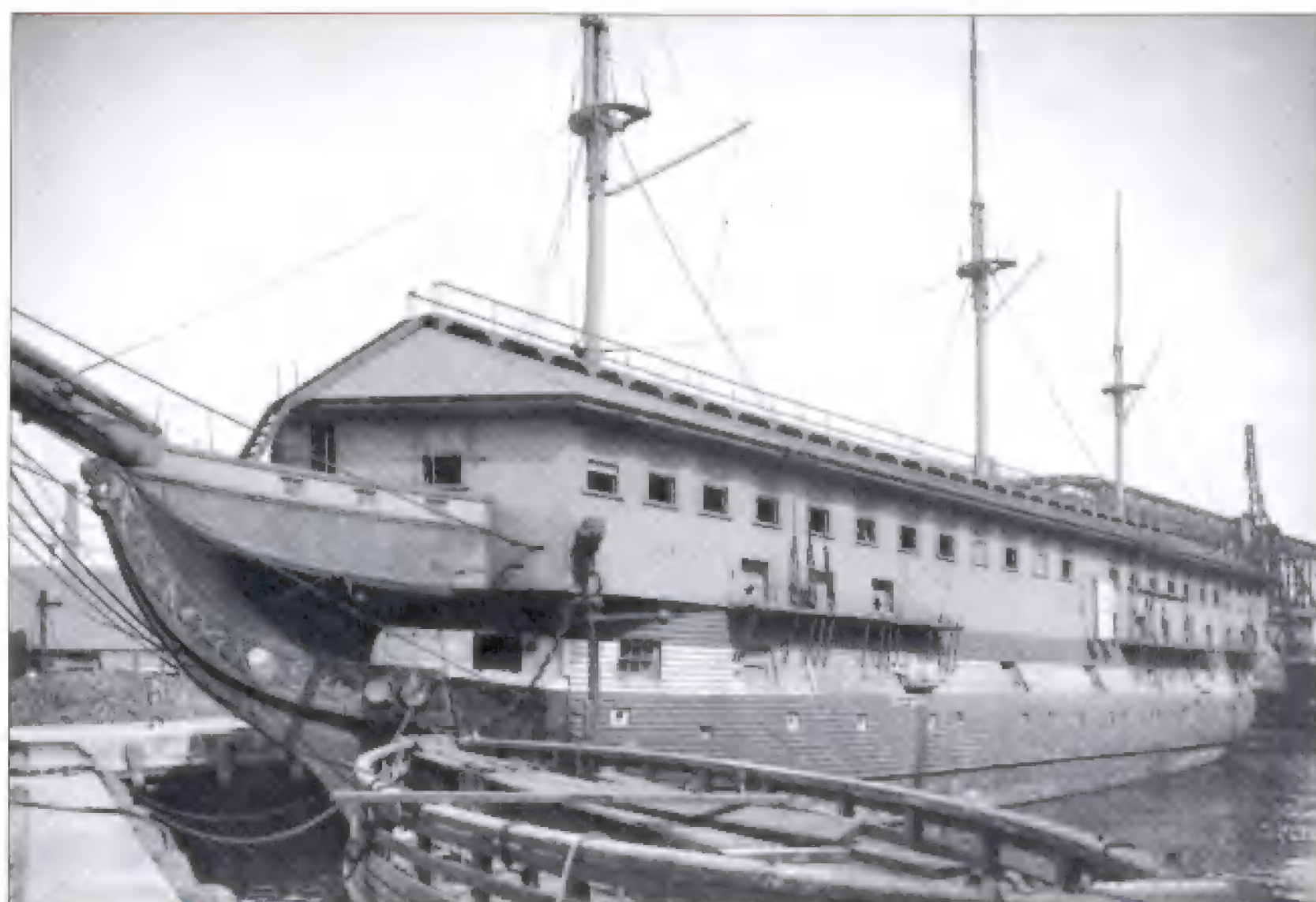


F. Capture of the USS *President*



G. Flags and weapons





By its centennial, the *Constitution* had been decked over with a barn-like house. It was used primarily as a receiving ship. Recruits were sworn into the Navy on its deck. (LOC)

Ironsides." A major rebuild followed in 1833, allowing it to serve as a first-class warship for another 20 years. In 1860 the *Constitution* was assigned to the United States Naval Academy as a school ship, where it served first in Annapolis, Maryland, then in Providence, Rhode Island, during the Civil War, and again in Annapolis until 1871. In 1877 it carried American exhibits to the Paris Exposition. It grounded off Britain while returning to the United States, and was assisted by the Royal Navy, who allowed the dockyard at Portsmouth to be used to help repair its old adversary. The *Constitution* was a sail training ship from 1879 to 1882, and was then towed to Portsmouth, New Hampshire, decked over, and used as a receiving ship until its centennial. It was towed to Boston and a partial restoration began in 1905. A full refit followed in the 1920s, and in 1931 the *Constitution* was recommissioned as the honorary flagship of the Atlantic Fleet. It was again rebuilt in 1971. Since then the *Constitution* has been a museum ship in Boston Harbor, where it can be seen today.

President

Laid down: 1797?, Cheeseman, New York City

Launched: April 1, 1800

First commissioned: August 10, 1800

Dimensions – LBP: 175ft, Breadth: 43ft 6in., Depth of hold: 14ft 4in., Draft: 21ft 4in.

Displacement: 1576 tons

Standard complement: 450

Initial armament: 30 24-pound long guns, 22 12-pound long guns

History: The *President* had a short active life. It served two cruises in the Mediterranean during the Barbary Wars. It was originally launched with a figurehead of George Washington, but this was replaced with a billet-head after colliding with the *Constitution* in the Mediterranean. After its capture in January 1815, the *President* was taken to Britain. The ship had been badly damaged, and a gale following the battle almost sank it en route. Battle damage prevented the Royal Navy from

and 1848–51 – and also served stints in the South Pacific, 1839–41, the Home Squadron, 1842–43, and the anti-slavery patrol 1852–55. Between 1844 and 1846 the *Constitution* circumnavigated the globe in a good-will tour under the command of "Mad Jack" Percival. The *Constitution* was almost sold out of the service in 1830, when a survey showed the ship to be unseaworthy. The Navy was shamed into rebuilding it by public sentiment, fanned by Oliver Wendell Holmes's poem "Old

recommissioning the prize, and it was scrapped in 1818. Lines were made in 1815, however, and the Royal Navy had an exact replica constructed, with an identical exterior appearance to the original. HMS *President* was launched in 1824, and enjoyed a long career in the Royal Navy.

War-built ships

Columbia

Laid down: 1813, Washington Naval Yard

Launched: Never

Commissioned: Never

Dimensions – LBP: 175ft, Breadth: 44ft 6in., Depth of hold: 13ft 6in.

Standard complement: 400

Displacement: 1508 tons

Intended armament: 32 24-pound long guns, 20 42-pound carronades

History: Built in the Washington Naval Yard, the *Columbia* was laid down during the War of 1812 after Congress expanded the Navy following the frigate victories of 1812. The ship was approaching completion when the British invaded Maryland in 1814. Ten days from launch, with the bottom already coppered, shipyard personnel burned the hull on the building ways prior to the British occupation of Washington DC to prevent the British from carrying the frigate off.



Two hundred years after launch, and restored to its 1812 appearance, the *Constitution* sails for the first time since the 1870s. The bicentennial voyage used only the lower sails, but demonstrated the still-potent symbolism of the ship to the United States and the American Navy. (United States Navy photo)

Guerriere

Laid down: 1813, Grice, Philadelphia

Launched: June 20, 1814

Commissioned: May 15, 1815

Dimensions – LBP: 175ft, Breadth: 44ft 6in., Depth of hold: 13ft 6in.

Displacement: 1508 tons

Standard complement: 400

Initial armament: 33 24-pound long guns, 20 42-pound carronades

History: Originally to be named *Continental*, the ship was renamed for *Constitution's* first prize. Ready for sea late in 1814, the *Guerriere* sat out the War of 1812, blockaded by the British. It did not get to sea until the summer of 1815, when it was dispatched to the Mediterranean as part of one of the two squadrons sent to deal with the Barbary states. After capturing both the *Meshuda* and a 22-gun Algerian brig *Estdi*, and participating in the squadrons forcing the surrender of Algiers, Tunis, and Tripoli, *Guerriere* returned to New York in November 1815, where it was laid up. It was recommissioned in 1818 and served in European waters through 1819. In 1820 it sailed to Norfolk, where it served as a school ship for seven years. *Guerriere* completed one more cruise, as flagship of the Pacific Squadron between 1828 and 1831. In 1831, the *Guerriere* was laid up in Norfolk, until it was broken up in 1841.

Java

Laid down: 1813, Flanagan & Parsons, Baltimore

Launched: January 4, 1814

Commissioned: August 1815

Dimensions – LBP: 175ft, Breadth: 44ft 6in., Depth of hold: 13ft 8in.

Displacement: 1511 tons

Standard complement: 400

Initial armament: 33 24-pound long guns, 20 42-pound carronades

History: Built under difficult conditions during the War of 1812, *Java* was neither popular nor distinguished. Assigned to the Barbary expedition in 1815, it sailed too late to take part because of difficulties in fitting out. It served a year in the Mediterranean from early 1816 through February 1817, and then returned to the United States for repairs. It did not sail again until 1827, when it was again sent to the Mediterranean. It returned to Norfolk in 1831, again in bad condition. It served there as a receiving ship, continuing to deteriorate. It was broken up in 1842.

“Gradual Increase” frigates

Potomac

Laid down: August 1819, Washington Naval Yard

Launched: March 1822

First commissioned: 1831

Dimensions – LBP: 177ft 10in., Breadth: 46ft 2in., Depth of hold: 14ft 6in., Draft: 20ft 6in.

Displacement: 1726 tons

Standard complement: 480

Initial armament: Eight 8-inch shell guns, 42 32-pound long guns

History: The first of the “Gradual Increase” frigates launched, the *Potomac* retained the old-style square stern. It was not completed until 1831, when it was fitted out for a punitive expedition against Malay pirates. The frigate, commanded by Captain John Downes, landed a force of 282 marines and sailors at Quallah Battoo, Sumatra (modern Kuala Batu). In the subsequent raid, the pirate leader Po Mohammed and 150 of his followers were killed. After returning to Boston in 1834, the *Potomac*

served two cruises off the Brazil Station, 1834–37 and 1840–42, and patrolled the West Indies, 1844–45 and 1846–47. During the Mexican–American War, it supported the Vera Cruz invasion. It served as the Home Squadron flagship, 1855–56. The *Potomac* supported the Gulf blockade during the American Civil War as a storeship. It finished as a barracks ship between 1867 and 1877, and was sold in 1877 and broken up.

Following a rebuild in the early 1840s the *United States* was sent to the Pacific Squadron. Among the crew was Herman Melville, who recorded his experiences in the novel *White Jacket*. This drawing by Gunner William H. Meyers, shows the *United States* and the sloop-of-war *Cyane*, *St Louis*, *Yorktown*, and *Shark*. (NHF)



Brandywine

Laid down: September 20, 1821,

Washington Naval Yard

Launched: June 16, 1825

First commissioned: August 25, 1825

Dimensions – LBP: 175ft, Breadth:

45ft, Depth of hold: 14ft 4in,

Draft: 22ft

Displacement: 1708 tons

Standard complement: 467

Initial armament: Probably 32

24-pound long guns, 30 32-pound
carronades

History: The second “Gradual
Increase” frigate launched,

Brandywine was the first to be commissioned. It was the first frigate finished with the new elliptical stern and was completed to escort the Marquis de Lafayette to France following his visit in 1824. Laid down as *Susquehanna*, it was renamed to commemorate the battle of Brandywine Creek, where Lafayette played an important role. After carrying Lafayette to France in late 1825, *Brandywine* joined the Mediterranean Squadron. Between 1826 and 1851 the vessel was almost continuously at sea. It completed three cruises of the Mediterranean, two of the Pacific, including one cruise in which it served as flagship, and one cruise of the Gulf of Mexico, East Indies, and Brazil. It was in ordinary at the New York Naval Yard from 1851 through 1861. In 1861 *Brandywine* was converted into a storeship, serving in Hampton Roads, Baltimore, and Chesapeake Bay. It was destroyed in an accidental fire on September 3, 1864 while serving as a store and receiving ship at Norfolk.



**The *Constitution* during its 1871 refit. Notice the Jackson figurehead, and the solid, planked-in beakhead.
(AC – Frigate *Constitution*)**

Columbia

Laid down: November 1825, Washington Naval Yard

Launched: March 9, 1836

Commissioned: May 1838

Dimensions – LBP: 175ft, Breadth: 45ft, Depth of hold: 13ft 4in., Draft: 22ft

Displacement: 1726 tons

Standard complement: 480

Initial armament: Four 8-inch shell guns, 28 32-pound long guns, 22
42-pound carronades

History: During its first cruise, 1838 through 1840, the *Columbia* served as flagship for the United States Squadron in the East Indies. It sailed to station via the Cape of Good Hope, and returned via Cape Horn, circumnavigating the globe. It served as flagship of the Home Squadron in 1842 before being reassigned to the Brazil Station. It shunted between Brazil and the Mediterranean between July 1842 and October 1847. *Columbia* remained in ordinary at Norfolk from 1847 until 1861, except for one cruise with the Home Squadron, 1853–55. During that cruise *Columbia* was armed with ten eight-inch Columbiad shell guns, and 40 32-pound long guns. The United States Navy burned *Columbia* during the evacuation of Norfolk in 1861 to prevent its capture by the Confederacy.

This print illustrates the burning of Washington by the British. The *Columbia*, seen burning in the lower left side, was actually burned by the Americans before the capture of the Washington Naval Yard. (LOC)



Savannah

Laid down: July 1820, Brooklyn Naval Yard

Launched: May 24, 1842

First commissioned: October 15, 1843

Dimensions – LBP: 175ft, Breadth: 45ft, Depth of hold: 14ft 4in.,
Draft: 22ft 8in.

Displacement: 1726 tons

Standard complement: 480

Initial armament: Four 8-inch shell guns, 28 32-pound long guns,
22 42-pound carronades

History: The *Savannah* joined the Pacific Squadron in its first cruise as flagship in 1844. When war with Mexico broke out in 1846, it led the squadron in a bloodless capture of Monterrey, California. *Savannah* underwent a refit in New York in 1847, and then served as flagship of the Pacific Squadron, 1849–52. After another refit, it was sent to Brazil for three years. The *Savannah* was considered to have some of the best sailing characteristics of any American warship. By the middle 1850s the United States Navy realized the limitations of the heavy sailing frigate. Heavy shell-firing guns made the double banks of 32-pound guns uneconomical. A single 8-inch or 10-inch Dahlgren shell-firing gun had more destructive power than four 32-pound long guns. In 1857 the *Savannah* was razeed to a sloop-of-war. The spar deck was cut down, and two 10-inch pivot guns were mounted on what was left of the spar deck. The main deck gunports were repositioned, and the *Savannah* was fitted with 22 guns on the main deck, using a mix of 8-inch and 32-pound guns. As a sloop, the *Savannah* captured two Confederate prizes in 1861. In February 1862 it was converted into a training ship, and assigned to the United States Naval Academy. Laid up after the 1870 training cruise, the *Savannah* remained in reserve until it was sold out of the Navy in 1883.

Cumberland

Laid down: 1825, Boston Naval Yard

Launched: May 24, 1842

First commissioned: November 1843

Dimensions – LBP: 175ft, Breadth: 45ft, Depth of hold: 13ft 4in., Draft: 21ft 1in.

Displacement: 1726 tons

Standard complement: 400

Initial armament: 40 32-pound long guns, ten 8-inch shell guns

History: Launched nearly two decades after being laid down, the *Cumberland* first served in the Mediterranean from 1843 to 1845. After returning to the United States it served as flagship of the Home Squadron in 1846, and participated in naval operations in the Gulf of Mexico during the Mexican–American War. It finished the cruise in the Home Squadron in 1848. The *Cumberland* then served two cruises in the Mediterranean from 1849 to 1851 and 1853 to 1855. In 1857 *Cumberland* was razeed to a sloop-of-war, and armed like the *Savannah*. It was then assigned to the Africa Squadron for the suppression of the slave trade from 1857 to 1859. *Cumberland*, laid up in Norfolk Naval Yard when Virginia seceded from the United States in 1861, was towed out of the yard, avoiding destruction. The *Cumberland* was then recommissioned and assigned to the Atlantic Blockade Squadron in Hampton Roads. On March 8, 1862 it became the first warship to be sunk by the CSS *Virginia*, a Confederate ironclad. After being rammed, the *Cumberland* sank almost immediately, with guns firing and flags flying.



The *Cumberland*, launched as a frigate, was razeed to a first-class sloop in 1856 in an attempt to keep the ship a useful member of the American fleet. (NHF)

Raritan

Laid down: September 1820, Philadelphia Naval Yard

Launched: June 13, 1843

First commissioned: December 1, 1843

Dimensions – LBP: 175ft, Breadth: 45ft, Depth of hold: 14ft 4in., Draft: 22ft 8in.

Displacement: 1726 tons

Standard complement: 480

Initial armament: Four 8-inch shell guns, 28 32-pound long guns, 22 42-pound carronades

History: By the early 1840s steam was emerging, and an effort was made to convert the *Raritan*, then on the stocks, to a screw steamer. Instead it was finished as a conventional sailing frigate. Much like her sisters, *Raritan* proved an outstanding sailer. It served in the South Atlantic from 1844 to 1845. Upon returning to the United States, the frigate joined the Home Squadron in 1846, where it participated in the blockade of the Mexican Gulf Coast during the Mexican–American War. Following the war, it served as flagship of the West Indies Squadron in 1849 and of the Home Squadron in 1850. In 1851, *Raritan* was assigned to patrol the Pacific coast of South America between Panama and Cape Horn. It returned to the United States in 1853, where it was laid up in Norfolk. Along with

Columbia, Raritan was burned in April 1861 when the Union evacuated Norfolk Naval Yard.

St Lawrence

Laid down: 1826, Norfolk Naval Yard

Launched: March 25, 1847

First commissioned: August 17, 1848

Dimensions – LBP: 175ft, Breadth: 45ft, Depth of hold: 14ft 4in., Draft: 22ft 8in.

Displacement: 1726 tons

Standard complement: 480

Initial armament: 42 32-pound long guns, eight 8-inch shell guns

History: The *St Lawrence* lay unfinished for so long that construction was suspended in 1842, its funds having been allocated to the construction of steam warships.

Finally completed as a result of the Mexican–American War, the frigate was commissioned after the war ended. It served as a school ship for an early “exchange” program in 1849, sailing to Britain, France, and Germany with a number of German Confederation midshipmen aboard. Following this voyage the *St Lawrence* was stripped of its armaments so that it could carry American exhibits to the London International Exposition of 1851 – the first “World’s Fair.” The *St Lawrence* next served two cruises with the

Pacific Squadron, one in the North Pacific, 1851–55, and one in the South Pacific, 1856–59. It was part of the Paraguay expedition in 1859, a diplomatic incident that ended peacefully. It then served in the Atlantic Blockade Squadron in 1861 and 1862, capturing a Confederate prize. Present at Hampton Roads on April 8, 1862, it was spared the fate of the *Cumberland* and *Congress* because of darkness. In 1863 it was converted into a storeship and anchored in Norfolk after its recapture. After the war it remained at Norfolk as a marine barracks ship until 1875, when it was sold out of service.

Santee

Laid down: August 1821, Portsmouth Naval Yard

Launched: February 16, 1855

First commissioned: June 8, 1861

Dimensions – LBP: 190ft, Breadth: 45ft, Depth of hold: 14ft 5in., Draft: 22ft

Displacement: 1776 tons

Standard complement: 480

Initial armament: Two 64-pound long guns, eight 8-inch shell guns, 20 32-pound long guns, 16 32-pound intermediate guns, two 12-pound long guns

The *St Lawrence* was finally launched during the Mexican–American War. It was well regarded, but was obsolescent at launch. This lithograph shows the frigate off the Isle of Wight during its first cruise. (NHF)



History: Finished primarily to clear the building ways for new construction, the *Santee* was not commissioned until the outbreak of the American Civil War. Joining the Gulf Squadron, it participated in the blockade of the Texas coast during 1861 and 1862. The ship took three prizes, but was returned to Boston in August 1862. There it was converted into a training ship, and assigned to the United States Naval Academy, then in Rhode Island. It returned the midshipmen to Annapolis, Maryland, at the end of the Civil War, and remained assigned to Annapolis for the next 50 years, first as a gunnery training ship, and finally as a barracks. On April 2, 1912, the *Santee* sank at its moorings at the Naval Academy. The hull was raised and scrapped in 1913.



The *Hudson* was the last American sailing frigate built by private contractors. Larger than "Gradual Increase" frigates, it was unpopular with naval officers. (NHF)

Sabine

Laid down: 1823, Brooklyn Naval Yard

Launched: December 2, 1855

Commissioned: June 8, 1861

Dimensions – LBP: 190ft, Breadth: 45ft, Depth of hold: 14ft 5in.,
Draft: 22ft

Displacement: 1776 tons

Standard complement: 480

Initial armament: Two 64-pound long guns, eight 8-inch shell guns, 20 32-pound long guns, 16 32-pound intermediate guns, two 12-pound long guns

History: As with the *Santee*, the *Sabine* was completed primarily to make the building ways available for new construction. First commissioned as part of the force sent on the Paraguay expedition, it served in South America between 1858 and 1860. During the Civil War, the *Sabine* participated in the relief of Fort Pickens in 1861. In 1864 it was converted into a training ship, making cruises until 1871. It then served as a receiving ship at Portsmouth, and was sold in 1883.

Other heavy frigates

Hudson

Laid down: 1825, Smith & Dimon, New York City

Launched: November 18, 1825

Commissioned: September 28, 1828

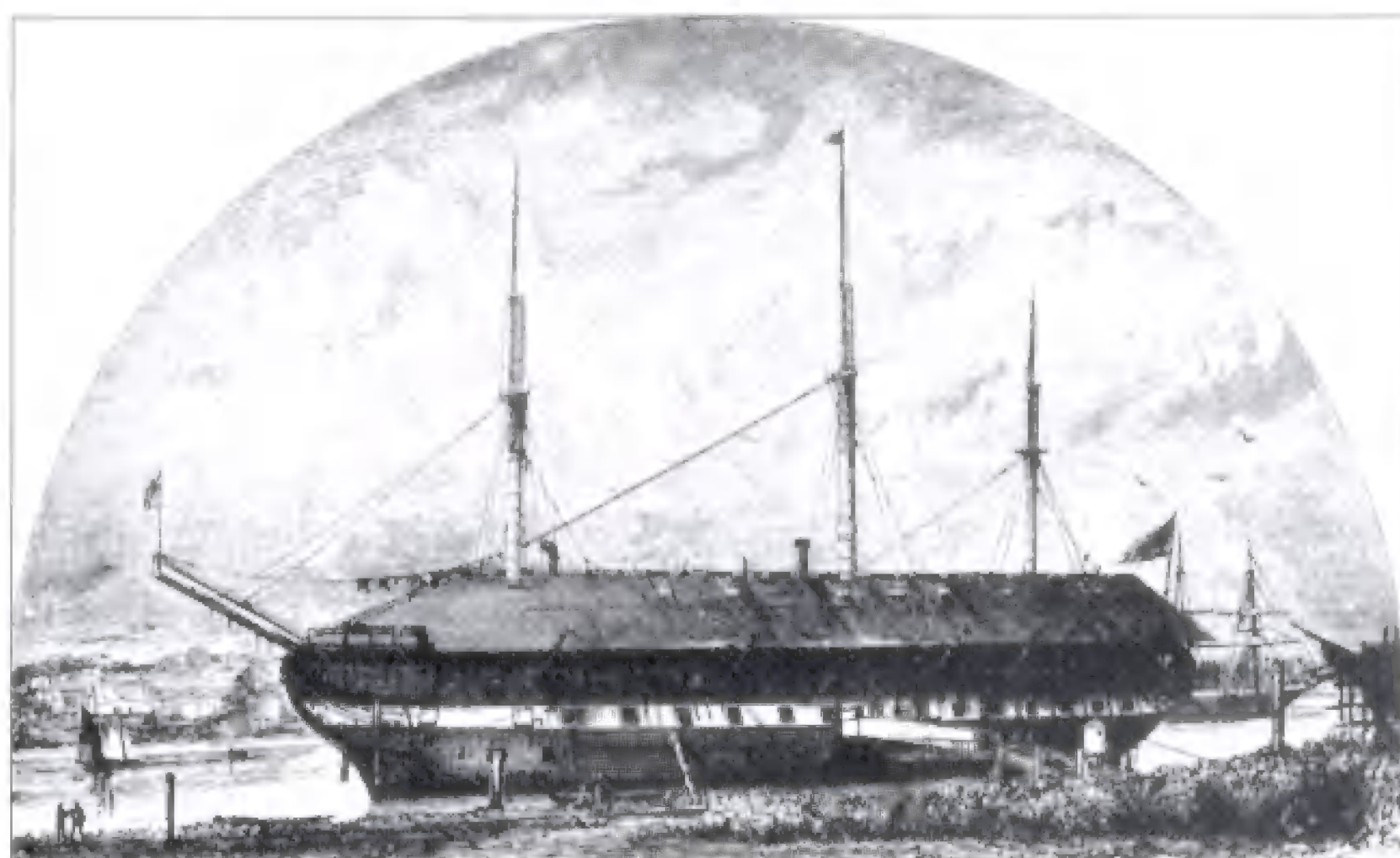
Dimensions – LBP: 177ft, Breadth: 45ft. Depth of hold: 13ft 8in.

Displacement: 1728 tons

Standard complement: 450

Initial armament: Probably 32 24-pound long guns, 30 32-pound carronades

The *Independence*, originally launched as a ship-of-the-line, was razeed to a frigate in 1836. After long service on the Pacific coast, it was converted into a receiving ship, and remained anchored at San Diego until the early 20th century. (AC – Battles and Leaders of the Civil War)



History: Purchased as the result of Congressional pressure, the *Hudson* had a short history and undistinguished career. Assigned to the Brazil Squadron in 1828, it served as flagship. It suppressed the slave trade on the Brazilian coast in 1829. By 1830 it was decaying rapidly, possibly due to poor construction and the use of white oak rather than live oak. It returned to New York in August 1831 where it became a receiving ship. The *Hudson* was broken up in 1844.

Independence

Laid down: August 8, 1813, Charleston Naval Yard

Launched: June 20, 1814

Converted: 1836

Commissioned (as razeed frigate): May 21, 1837

Dimensions – LBP: 190ft 10in., Breadth: 54ft 7in., Draft: 21ft 4in.

Displacement: 1820 tons

Standard complement: 550

Initial armament: 60 32-pound long guns

History: The *Independence* was the first ship-of-the-line built in the United States since the American Revolution. A Joshua Humphreys plan was used, with the building superintended by his son, Samuel. A construction error made the lower gundeck useless, so it was converted to a frigate in 1836, after one cruise as a ship-of-the-line. Following conversion the *Independence* carried the American ambassador to Russia to Cronstadt, and then served as the flagship of the Brazilian Squadron from 1836 through 1840. Between 1842 and 1845 it was the flagship of the Home Squadron. Recommissioned in 1846 during the Mexican–American War, the *Independence* sailed to the Pacific, where it served as flagship of the American Navy off California, then part of Mexico. Participating in operations to blockade and then invade and capture California, the *Independence* remained with the Pacific Squadron until 1848. It served as flagship of the Mediterranean Squadron, 1849–52, and Pacific Squadron, 1854–57. In 1857 the *Independence* was converted to a receiving ship at the Mare Island Navy Yard in California, and remained there until November 1914, when it was sold out of the Navy.

Congress

Laid down: January 6, 1839, Plymouth Naval Yard

Launched: August 16, 1841

First commissioned: May 7, 1842

Dimensions – LBP: 179ft, Breadth: 47ft 10in., Depth of hold: 15ft 5in.,
Draft: 22ft 6in.

Displacement: 1867 tons

Standard complement: 480

Initial Armament: Eight 8in. shell guns, 42 32-pound long guns

History: Intended to be the new standard for frigates, the *Congress* was the

first United States frigate built to an original design in nearly 20 years. The ship proved tremendously popular in the United States Navy. It was fast, a good sea boat, and maneuverable. It saw active service virtually throughout its entire lifetime. The ship had one cruise to the Mediterranean and one to South America prior to the Mexican–American War. In 1846 it was dispatched to the Pacific, where it was active throughout the war with Mexico,

returning to the east coast in early 1849. Recommissioned in 1850, it served off Africa, suppressing the slave trade. In 1851–53 it served as flagship for the Brazilian Squadron, then served in the Mediterranean between 1855 and 1857. In 1859 it was again sent to Brazil, but was recalled when the Civil War began. Assigned to the Atlantic Blockade Squadron in September 1861, the *Congress* was in Hampton Roads on March 8, 1862. Forced aground while fleeing the *Virginia*, the *Congress* was shelled and burned to the waterline.

Weapons systems change, but not the importance of heritage and tradition. The Blue Angels fly over the *Constitution* during its bicentennial sail. To the right of the 18th-century sailing frigate is a 20th-century frigate, USS *Halyburton*. (United States Navy photo)



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GLOSSARY

- Berth deck:** The deck below the gundeck on an American frigate, where the crew slept.
- Carronade:** A short-barreled smoothbore gun that could throw a much heavier ball than a traditional long gun whose barrel weighed the same. A 12-pound carronade weighed less than a 4-pound long gun, but fired a ball that weighed three times as much, roughly the same distance as the 4-pound gun could reach. However, a 12-pound carronade had a much shorter range than a 12-pound long gun.
- Columbiad:** A medium-length cannon designed to shoot explosive shells. Columbiads could fire a round further than a carronade of the same bore, but not as far as a long gun.
- Fore-and-aft sails:** Triangular and trapezoidal sails that were rigged parallel to the length of the ship. The sails set on the stays that supported the masts were called staysails or jibsails (if they were on the jib stays). The sail set on a gaff and boom attached behind the mizzenmast was called the gaff, spanker or spencer sail, depending on the navy, period, and rig. Fore-and-aft sails were used to help steer the ship, and when beating into the wind.
- Forecastle:** A raised platform at the front of the ship generally used to manage the anchors and foremast and to provide protection from a head sea.
- Frigate:** A sailing warship with one full gundeck and additional guns mounted on the forecastle and quarterdeck. A warship with a full gundeck and additional guns mounted only on the quarterdeck is sometimes called a jackass frigate.
- Gundeck:** The deck on an American frigate or sloop-of-war carrying the main battery of guns. It was considered the upper deck of the ship,

despite the spar deck above it. A ship-of-the-line or two-decker had more than one gundeck. These are identified by their position – upper, lower or middle (if there are three gundecks).

In Ordinary: A ship docked in a naval yard, stripped of its upper masts and spars, guns, stores, and movable fittings, with the intention of preserving a ship until the next time it is needed for active service.

Leewardly: Said of a ship that tended to crab sideways to the lee (downwind) direction instead of moving straight ahead. This could be caused by a number of different things, including too much freeboard, the ship heeling over too much, or a poorly designed keel.

Orlop: A set of platforms below the berth deck, but above the bottom of the ship, used to carry supplies, and house personnel (generally warrant officers).

Poop: A light, partial deck occasionally found above the quarterdeck. The poop provides the top of admiral's or flag quarters or to shelter the wheel. Generally it begins near the mizzen mast.

Quarterdeck: A partial deck above the main or gundeck where the navigation and operation of the ship is managed. Generally the quarterdeck starts between the main mast and the mizzen mast.

Rake: Firing a broadside down the length of the opposing warship, either from the stern or bow. Raking shot caused much more damage because it went the length, rather than the breadth, of a ship.

Razee: A ship that has had its upper deck removed, converting it into the next smaller class of warship. A ship-of-the-line is razeeed to a frigate. A frigate is razeeed to a sloop-of-war.

Ship-of-the-line: A ship-rigged warship with at least two full gundecks and additional guns on the quarterdeck and forecastle that is strong enough to stand in the line of battle. Ships-of-the-line mounted between 64 and 140 guns.

Ship-rigged: A ship with at least three masts, all carrying square sails.

Sloop-of-war: A warship with guns mounted only on the gundeck. Three-masted sloops-of-war were often called ship-sloops, and two-masted sloops-of-war were often called brig-sloops. Occasionally a sloop-of-war had additional guns mounted on the quarterdeck. These are also referred to as "post" ships or jackass frigates.

Spar deck: A flush deck on an American frigate consisting of the fore-castle, quarterdeck, and the gangways connecting the quarterdeck and forecastle. Generally there is an opening amidships spanned by skids on which the spare spars and ship's boats are kept.

Squaresail: Four-sided sails, occasionally square, but more often trapezoidal set on spars, and perpendicular to the length of the ship. American frigates generally mounted five, and sometimes six, sails on their masts. From lowest to highest were the course, topsail, topgallant, royal, skysail, and moonsail or hope-in-heaven. (The name of the sixth sail varied widely.)

Studding (or stun) sails: Sails mounted outboard the square sails to add more sail area during light and moderate winds.

Two-decker: A ship-rigged warship with two full gundecks and additional guns on the quarterdeck and forecastle that is too weak to stand in the line of battle. These 44-gun to 56-gun warships were miniature ships-of-the-line, useful for convoy duty and as flagships. They were often confused with frigates because they mount a similar number of guns.

COLOR PLATE COMMENTARY

A. USS *UNITED STATES* – SAIL PLAN

The *United States* was not only the first frigate built for the United States Navy, but was the only one built with a poop, and the only one whose construction was directly overseen by Joshua Humphreys, the self-taught genius who designed the American 24-pound frigates.

This plate illustrates its appearance early in its career, within a year or two of its launch in 1797. At the time it was armed with 14 12-pound long guns on its quarterdeck. At launch, masts, spars, and sails were much smaller than those carried during its later career, leading to laggardly performance in light airs. Note that this plan only shows courses, topsails and topgallants. Royals could be set flying, but were not typically used in its first years. A frigate that in the 1840s had the reputation as the fastest ship in the United States Navy gained the nickname "The Old Wagon" at this stage of its career.

Other differences in appearance include open bulkheads in the waist on the spar deck, and rails in the beak, near the bowsprit. Later these would be planked in, with increasingly heavy timbers. Additionally the *United States* initially carried a figurehead representing "the Spirit of Liberty." This was replaced with a plain fiddlehead at some point prior to 1808. Finally, the initial color scheme was much different. When launched the *United States* sported black sides with a wide buff-colored band along the gundeck's ports, much wider than the one it would use later.

B. USS *CONSTITUTION* EVADING THE BRITISH FLEET

At the outset of the War of 1812 an American squadron chased the British *Belvidera*. After *Belvidera* escaped, it took word to Halifax, headquarters of the British North American Squadron. All available forces – four frigates and a 64-gun ship-of-the-line – set sail in search of Commodore Rodgers' squadron. Instead, on July 17, 1812, off the New England coast, they encountered the *Constitution* also seeking Rodgers.

An epic three-day chase followed. Throughout it the winds were light or nonexistent. As the winds eased even more, the *Constitution* and its pursuers set every stitch of

sail, attempting to wring an advantage from the winds. The *Constitution* had the advantage of a clean hull – it had just left port after a refit – and a light load, improving its performance in light airs.

Finally, the winds died entirely. Both sides began towing the frigates with boats. This gave the British an advantage – they could draw on the crews and boats of five warships. Tired crews could more easily be replaced. By concentrating on one frigate, the *Shannon*, the British soon gained on the *Constitution*. Then, mysteriously, the Yankee frigate widened the distance.

Isaac Hull, commanding the *Constitution*, resorted to kedging. An anchor was pulled ahead of the frigate the length of its cable by one of the ship's boats. The anchor was then dropped, and the cable pulled in by the capstan, drawing the ship to the anchor. A second boat simultaneously brought the second anchor forward, and the process was repeated. This allowed the *Constitution* to use more of its crew than towing, and to use their muscle-power more efficiently.

The British soon imitated the *Constitution*, but could not use their numerical superiority to the same advantage as when they were towing. They gained on *Constitution* again, but this time more slowly. Before they came within gunshot, darkness and rain allowed the *Constitution* to escape.

C. GUNDECK OF A HUMPHREYS FRIGATE

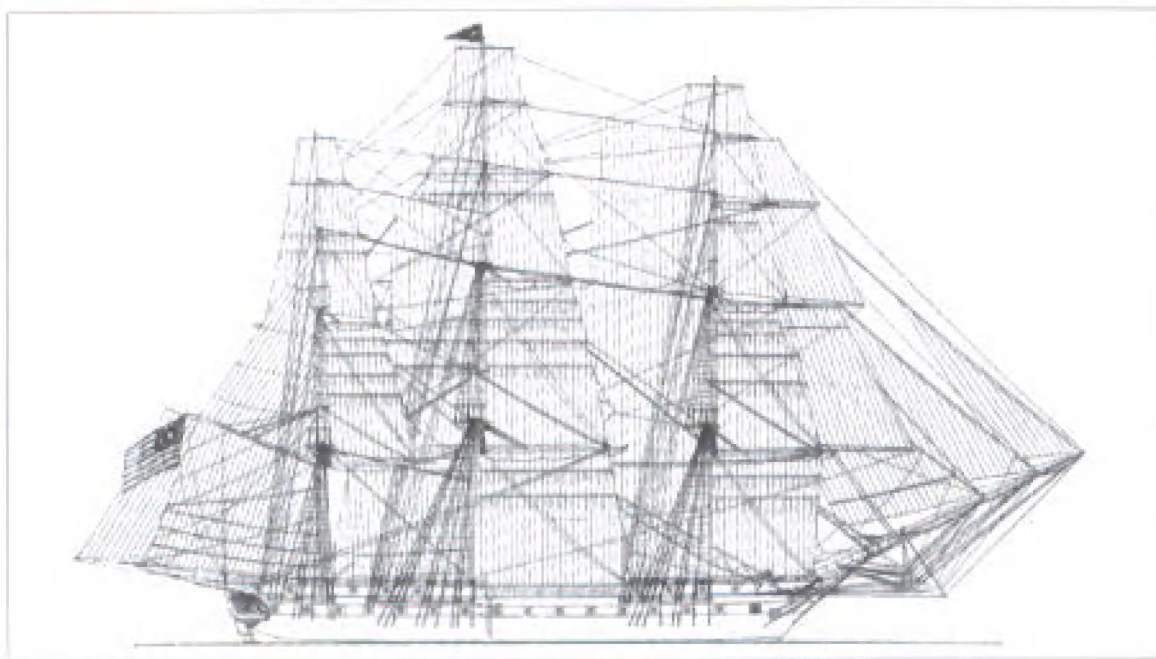
The Humphreys heavy frigate was designed as a platform for the 24-pound long gun. The length and breadth of these vessels allowed 15 24-pound gun broadsides to be accommodated without crowding. While the bow and stern lacked buoyancy, the gundeck was still wide enough to ensure that the two broadsides did not interfere with each other even at the bow and stern.

The gundeck was the highest complete deck of an early American frigate. The spar deck (seen above) connected the forecastle with the quarterdeck using gangways, leaving an open area in the waist. Spare spars and ship's boats were stored on the skids crossing this main hatch.

Besides the guns, the gundeck held the capstan used to raise the anchors, the ship's pumps, the galley, and the



The twilight of the sailing frigate. This illustration of the Brooklyn Naval Yard in the spring of 1861 shows three of the "Gradual increase" frigates – reduced to the background by the steam frigates. From left to right are *Montgomery*, *Vandalia*, *Brandywine*, *North Carolina*, *Potomac*, *Savannah*, *R.R. Cuyler*, *Mount Vernon*, *Roanoke*, *Resolute*, and *Wabash*. (NHF)



By 1812, masts and spars on the heavy frigates had evolved to the lofty proportions associated with American frigates. This illustration of the *Constitution*'s 1817 sail plan shows a ship with skysails over the royals, and oversized gaff sails on booms. (AC - Frigate Constitution)

captain's quarters. In this plate you can see the pumps, the main gangway, the grog tub that held the day's rum ration, and the scuttlebutt containing drinking water.

The initial sets of 24-pound guns were manufactured in Britain and sold to the United States Navy at the beginning of the Quasi-War. By the War of 1812, the *Constitution* had ten 24-pounders made in the United States. Shorter and lighter than the English-pattern cannon, they were placed in the bow and stern.

In front of the guns are various items of equipment used to fire the gun:

1. sponge tub - holds water to swab out the gun
2. sponge - soaked in water, and run down the gun to douse any unburnt gunpowder after firing
3. flexible sponge - used when there was no room to use the standard sponge
4. rammer - used to ram home the gunpowder charge and barrel
5. handspike - used to turn the gun carriage
6. wormer - used to pried out unburnt cloth or carbon build-up in the barrel

D. OLD IRONSIDES

Built in Boston, Massachusetts, in 1794, launched in 1794, and a member of the United States Navy for over 200 years, the USS *Constitution* is the last surviving member of the 18th-century United States Navy. Possibly the most famous American warship, it was certainly the luckiest. It was spared destruction or capture on nearly a dozen occasions. Besides escaping British fleets in 1812 and 1814, it avoided scrapping in the 1830s after a popular outcry, and underwent critically needed refits in 1870, 1906, 1927, and 1990 – most of which took place only just in time to save the ship from destruction.

The most recent refit, scheduled to prepare the ship for its 200th anniversary, restored the ship to its 1812 appearance – as shown in this plate. By then its original Hercules figurehead had been replaced with a fiddlehead scroll, the spar deck battery had been replaced with 32-pound carronades, and the head retained its open railings.

The 1920s restoration retained the planked-in head, but replaced the Andrew Jackson figurehead, which the

Constitution sported between 1834 and 1900, with a fiddlehead. A major difference between the 1812 frigate and the frigate as it appears today is the spar deck guns. With the exception of a few modern replicas, the upper battery contains 32-pound trunnioned gunnades (short-barreled trunnioned cannon similar to a carronade). These guns were first cast in the 1840s and originally intended for the three-decker *Pennsylvania*.

E. USS BRANDYWINE – MAST ARRANGEMENT

Brandywine was the first "Gradual Increase" frigate completed. Although the *Potomac* had been launched three years before *Brandywine*, *Brandywine* was commissioned first. One reason was *Brandywine*'s elliptical stern, the last word in modern naval architecture in the 1820s. A frigate was required for a high-profile diplomatic mission – carrying the Marquis de Lafayette back to France – and the Navy wanted one to serve as a showpiece of American shipbuilding.

Early in its career *Brandywine* had a reputation for excellent sailing characteristics, especially under strong winds. Nicknamed the "Roaring" *Brandywine* by its crews, it was a popular command throughout the 1820s and 1830s. This plate shows the mast arrangement during that period, illustrating the lofty spars United States frigates sported following the War of 1812. It provides an interesting contrast to the more conservative sail plan used by the *United States* in Plate A. Ironically, by the 1830s, only the *United States* – refitted with larger masts than in its earlier commissions – could outsail *Brandywine*.

Isaac Hull outran both a British fleet and orders relieving him from command of the *Constitution* to meet *Guerrieré*. (USNA-M)



In 1825, when *Brandywine* carried Lafayette to France, it would have been painted in the standard black-and-white scheme used by the United States Navy between the War of 1812 and the American Civil War. In 1825 it would have flown the 24-star flag with the stars possibly arranged in the great star pattern shown.

Later the masts were moved. This resulted in the ship being difficult to handle in heavy winds, and a tendency to pitch in head seas. Removing ballast to reduce the pitching reduced the draft, and made *Brandywine* leewardly.

F. CAPTURE OF THE USS *PRESIDENT*

By 1814 the British wanted to capture an American 44-gun frigate. Capturing *Chesapeake* and *Essex* restored British pride, but left intact the reputation for invincibility acquired by the big Yankee frigates. The Royal Navy posted squadrons containing British super-frigates outside the ports harboring the American 44s, and relentlessly pursued the Yankee frigates whenever they sailed.

Luck – bad for the Americans, good for the British – allowed the British to catch the *President* when it left New York in January 1815. The *President* fled, pursued by four British frigates. The chase started at dawn and continued all day. At first the razee *Majestic* took the lead in the pursuit, but as the wind moderated the heavy ship fell behind, and *Endymion*, copied from the French prize *Pomone*, passed *Majestic* and began closing on the *President*.

Stephen Decatur, commanding the *President*, tried everything he could to escape. Water, stores, and spare spars had been jettisoned. Every sail was set. Yet the ship had lost trim when it grounded and could not outrun *Endymion*. By dusk, *Endymion* was within range of its opponent. It closed on the starboard quarter of the *President*, where it could fire without response.

Decatur bet everything on beating *Endymion*, and one of the most unusual frigate actions of the sailing era resulted. Both frigates fought with all sails set – almost unheard of owing to the fire hazard posed by firing a broadside with courses and lower studding sails set. Decatur loaded his guns with disabling shot – star, bar, and chain shot intended to strip rigging from masts and spars – brailed up the spanker, and turned abruptly towards *Endymion*.

Endymion's captain delivered two raking broadsides as the *President* closed, then settled into a slugging match. The *President*'s fire stripped the sails and rigging from *Endymion*, which lost its fore topmast and main topgallant in the exchange, and most of the canvas it had set. It fell out of the fight, unable to pursue further. The British fired low, inflicting severe damage to the *President*'s hull, and killing and injuring many.

Night had fallen, and Decatur must have felt that he had won his gamble as he slipped away from *Endymion*. The duel allowed two other British frigates – standard 38-gun ships armed with 18-pound batteries – to catch the *President*. Too badly damaged by *Endymion* to escape, the *President* surrendered.

G. FLAGS AND WEAPONS

Between 1794 and 1818 the United States flew a 15-star, 15-stripe flag rather than the 13 stars and stripes of the American Revolution. The two additional stars and stripes represented Vermont and Kentucky, states admitted prior to



The beau ideal of the American naval officer, Stephen Decatur held the distinction of being the only American captain to capture a British frigate and surrender an American frigate, and led the American squadron that finally defeated the Barbary States. (LOC)

1794, when the new flag was authorized. By 1812 there were 20 states, but the 15-star flag flew throughout the War of 1812 until 1818, when Congress changed the design to the flag used today – 13 stripes for the original 13 states, and one star for each state.

The 15-star flag is called the "Star-Spangled Banner" after the song that Francis Scott Key wrote about the flag that flew over Fort McHenry when the British assaulted Baltimore. The song became the official national anthem of the United States in 1912.

The signal flags were used by the United States Navy during the Quasi-War. The signal flying is number six in the signal book – "to follow the commander."

While the 24-pound long gun and 32-pound carronade represented the main punch of the American heavy frigate, edged weapons still played an important role throughout the age of the sailing frigate. Weapons used during this period are:

1. Boarding axe
2. Boarding pike
3. Common sailor's cutlass
- These are standard-pattern weapons issued by the Navy:
4. Midshipman's dirk – a short sword or long knife
5. Midshipman's cutlass – this cutlass was owned by Stephen Decatur as a midshipman
6. Officer's sword used by Edwin Preble while commanding the Mediterranean Squadron.

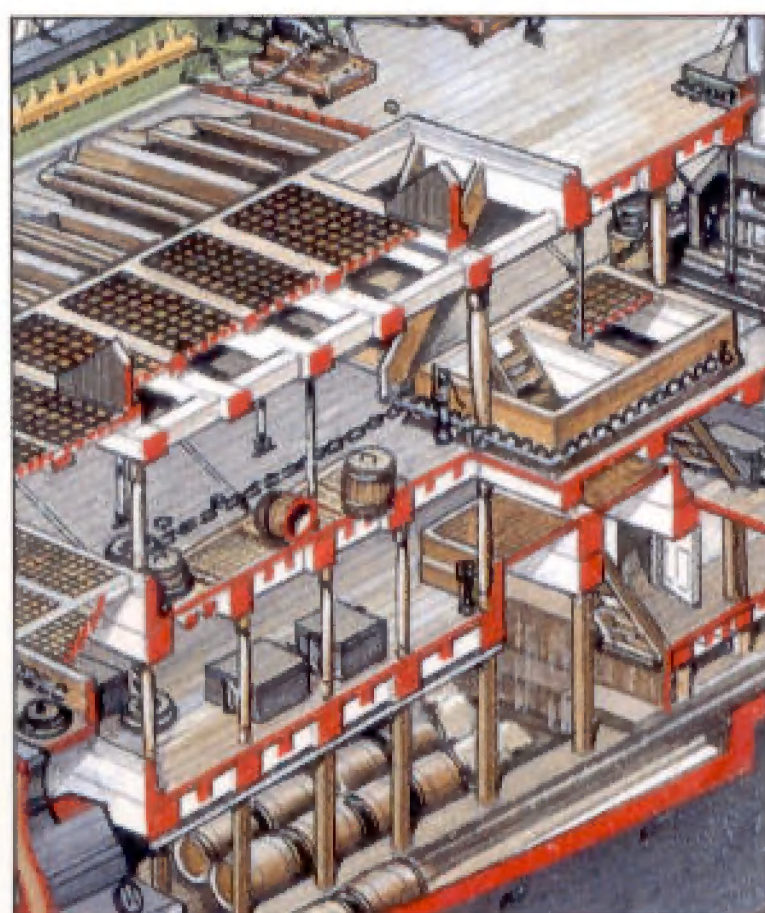
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